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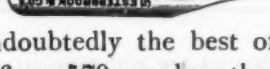

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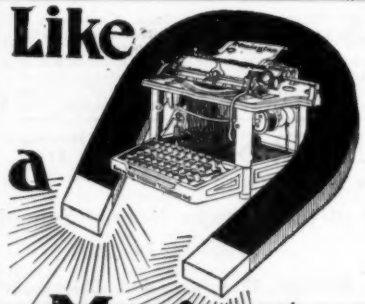

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Dr. Harris on the Freedom of the Will.

SYNOPSIS OF AN ADDRESS GIVEN TO THE NEW YORK UNIVERSITY SCHOOL OF PEDAGOGY.

As a result of the interest aroused in the study of the logic of sense perception, the class in "Institutes of Pedagogy" invited Dr. W. T. Harris, its author, to address the members on some educational topic. This invitation he generously accepted, and on Wednesday, March 9, he addressed the class, speaking on the "Freedom of the Will." His exposition of the freedom of the will, will long be remembered as one of the great events in the annals of the School of Pedagogy. The following is an epitome of his remarks:

"The influence of Herbart on educational thought has been significant and of great value. In Pestalozzi too much emphasis was placed on sense perception. Herbart raised a new battle-cry, namely, apperception. Although little worth can be ascribed to his philosophy, his pedagogy has been of great value in drawing attention to the minor processes of the child-mind. His disciples do not agree with his metaphysics. His view of apperception was mechanical. He denied the existence of a transcendental will, and thereby destroyed the idea of moral responsibility. Most of his followers admit some modifying power of the ego, but again enthrall themselves in the idea of the strongest motive. The revelation of this category came first from Plato, and was afterward developed by Aristotle into a system. The category of totality is self-determination. Fate is determination through another.

"The potential oak in the acorn, which by a determination of its own, extracts from the air and the soil the elements of development, is a figure of the self-developing, self-determining ego.

"Those who hold that desire is determined by the strongest motive, think in the category of externality; the fallacy lies in assuming motive to be external, a determining agent, rather than something determined, created, by the self-active ego. A proper analysis of motive demands an act of idealization, the thinking something other than it is, and it presupposes a power to achieve that ideal representation. Thus the very basis of motive is found in the normal activity of creative thonght. An apple is naught to me as it exists externally. I must think it other than it is in order to desire it. I do not desire it as it is, but as it is to be. Upon the possibility of thinking away the real, depends the creation of motive. The mind turns the real into the ideal by its own freedom. Man is an ideal-seeing animal.

"Armed with the principle of evolution, which is an ideal, we add to the real the ideal, which gives us science—a deeper reality that transcends the real. The truly actual is a transcendent real; that which includes all the potentialities of the actual.

"There is, therefore, a double freedom in us. We first make ideals out of reals, and then realize those ideals.

"Thus we set the category of fate, as external determination, over against rationality as a category of the understanding. In the discovery of our higher self we find among the potentialites essential to self-realization, that of recognizing the rights of our other ego. We must be educative of others. Then, being puts on the form of the Divine. Self-activity must realize itself or be immoral. This is the ethical form of absolute being."

What Can Child Study Contribute to the Science of Education?

(Abstract of a paper read before the Department of Superintendence, National Educational Association, at Chattanooga, by Professor Reuben Post Halleck, of Louisville, Ky.)

Sympathetic observation of children, in other words, rational child study, has helped the science of education in certain important ways. While child study may have contributed little that is entirely new, it has emphasized certain truths which were before only dimly known, and it has emphasized them in such a way as to make them operative. That ought not to be called knowledge which has no outcome in action.

Child study has quickened the blood in the old science of education by some welcome directions for developing what is potentially in the child. Observation of children has disclosed some of their leading potential capacities, which have not had sufficient nurture under the older education. If we have through a study of children a clearer idea of their potential capacities, we can certainly educate the child more scientifically.

First and foremost, child study has shown that the strongest potential capacity is the capacity for action. If teachers reply that it needed no prophetic child student to tell us this, the theory must come sharp and quick, "Has your teaching been such as to develop or throttle this capacity for action? Have you trained children to become men of action in a world of ceaseless struggle, or have you endeavored to paralyze their love of activity by feeding them almost exclusively on what Shakespeare has termed the alms bas-

ket of words?" There could have been no effective knowledge of childish activities unless they were ministered unto. If you know and love your vocation, feed the activities of your lambs.

Observation of children has pointed out the fact that this capacity for action takes chiefly the direction of imitation. Before the end of the first year the child has begun to imitate the world around him. He is, consciously or unconsciously, trying by his own activities to create a copy of that world. Every one who comes within range of the child's senses is his keeper.

Imitative actions leave in the motor nerve cells an impress or a neutral tendency to reproduce the movements unconsciously. A child of twelve months recently imitated the opening and the closing of his father's hand. While the child was sleeping the following night, his hands opened and shut like his father's. Since the child was then unconscious, these movements could not have been mental; they were the result of a new material disposition in motor nerve cells, which discharged automatically in the direction of former activities. In other words, actions effect a change in motor nerve cells, and that change is the physical basis of motor memory. Sleeping children have often been noticed to move their limbs, pucker their lips, and scowl, in imitation of parent or nurse. A permanent modification in the nerve cell is usually the result of these imitated actions, which will tend henceforth to become unconsciously persistent. These truths ought to make us realize in a new light what is meant by tying a child helplessly to his own past. If we have given the child his fitting birthright, we have during his imitative period ingrained in his very nerve cells a tendency to habitual actions of the right kind. Only such a child is ever enfranchised. He has the lower order of things a matter of neutral certainty.

In some respects this age has deteriorated in teaching and some of this deterioration is due to those who are ceaselessly crying, "Parrot teaching." It is high time for some one to champion the parrot's place in nature, unless it can be shown that the Almighty or nature made a mistake in evolving the parrot and imitative activities of children. Parrot teaching has its place, just as much as teaching of a different order, and neither can take the place of the other.

How any teacher who knows the predominant potential capacity of the child and the necessity of repetition for a lasting basis of neutral memory, can decry a large amount of parrot teaching is simply inexplicable. When a child learns the pronunciation of his own or of a foreign tongue, the more parrot-like he follows a perfect model, the better. Any language is largely arbitrary. A rose might as well have been called by some other name. Spelling is worse than arbitrary. Many results of the newer education have been of the uncertain, scattering type. There has been but little absolute neural certainty about the child's acquisitions.

In these later years I have witnessed the sowing of the seed for a crop of miserable spellers, and I have lived to see the crop reaped. Good spelling had, in the majority of cases, required much parrot repetition, and of course that could not be tolerated. The old schoolmaster may not have known the technical name for motor memory, but he did know better than to attempt to put frills and furbelows on the garment of the child, while the garment itself was a thing of shreds and tatters, which barely hung together.

The only reason that I can see for decrying the development of the child's imitative powers is because some teachers may think that this training, which merely lays the foundation, is to be all and the end of all teaching. A dwelling-house is something more than the foundation, and education must build lofty stories of thought on these foundations of imitation or they will be laid in vain. Parrot training must be in inverse proportion to the age of the child.

A study of children has emphasized the need of a higher type of motor education. This might be termed the imaginative type, and it is noticeable whenever a child begins to alter his toys or to construct something new. Fifty years ago a larger percentage of children received this training in the greatest institutions for motor education ever conceived. We have to-day the kindergarten, which does excellent work for a very few years. After leaving the kindergarten, the child seldom receives more motor training than what he picks up of himself in his games. The manual training school has recently been established to supply this deficiency. The object is altogether a worthy one. Has it succeeded, or does the manual training school, like institutions of a different kind, need changing in certain points? It must be understood that our attitude toward a school with such an object cannot possibly be antagonistic. We have in this country a number of great technical institutions, which pre-eminently fit young men for action, whether in building bridges, railroads, or in working mines. A president of one of these technical schools said to me that having tried students prepared at a number of manual training schools, he preferred the graduates of English or classical high schools. I shall not give his reasons, as he may shortly wish to state them himself, but such an opinion from such a source is worthy attention.

Fifty years ago there was not the present crowding into the cities. Men like George Washington, Daniel Webster, and Abraham Lincoln had the magnificent motor training of the farm. Our schools have not yet equaled its methods. If there is one kind of training where parrot methods must not be employed after the beginning of adolescence, that kind is motor training. If the boy at that age is tied down to drawings, patterns, and models, made for him by another, the active side of the creative life will be nipped in the bud. There is nothing else so dwarfing as this type of motor training. The reason is because a deep pathway is formed in a growing brain by a repeated movement of the same kind. This means not only a more facile discharge of action along that path, but also a blocking of other paths. The deep bed of a stream will not easily admit another outlet. Here is a special reason why so few get ideas after thirty. An idea is worthless unless it goes out in action, and actions by the age of thirty are generally fixed by habit. An imitated movement oft repeated ought early to be combined with other movements in ever varying combinations.

Then these different types of movement will have connecting paths like canals connecting one body of water with another. It is not much use to try to teach an old dog new combinations of movements.

How does the motor training of the farm differ from that of the school. On the farm varied motor combinations are in constant requisition. The boy is called on to repair a fence with insufficient materials, to mend a wagon shaft on which a horse has stepped, to fix the harness on the road, to repair a horse rake or mowing machine, to mend a milk pail, build a hen coop, stop a leak around a chimney, build a wall out of irregular stone, drill holes, rivet things together. It is a great advantage for the boy to have few tools, for he thereby learns how to make ingenious shifts and new combinations of movements. A rule and line carpenter would be in despair if he had to repair things under the disadvantages that confront a farmer's boy. I have often thought of how Washington and Lincoln learned in the constantly recurring emergencies of farm life to face new problems and to solve them.

Movements furnish the best possible opportunity for training the powers of thought. I do not believe that children can be taught to think naturally in any other way except by movement. Close attention is requisite for thinking, and the child finds little trouble in centering his attention on anything that moves, whether his own hands or external objects. The child who does not think as he moves, will soon meet with a painful accident or be killed and removed to make room for some one who does think. I know of no better way to eliminate thoughtlessness from a child than to set him to moving. Scratches, bruises and falls are powerful cultivators of thought. Movement means pain or death to the thoughtless. In spite of child study the teacher still loves to train children to think in the natural way. Let it not be forgotten that humanity in its wonderful march from barbarism to civilization was trained in the school of movement.

Observation of children has certainly contributed to the science of education something in regard to the teaching of morality. Such observation has shown that those who try to teach morality by word of mouth, waste their efforts. Morality concerns itself with action alone. Where there is no action, there can be no morality. How many teachers show children how to be moral on the active side and lead the way? Children frequently receive more training in both thought and morals from their own games than from books. A recent English psychologist says: "What our national games have done for the English race it is difficult to overestimate. The playing fields are the finest schools of organized co-operation in the world."

The speaker closed by saying that to heap together a mass of soulless statistics about children is not to study the child. However useful a reasonable number of observations may be, the one who rests content with them will always find a rubicon between himself and the soul of the child. Statistics afford a vantage ground for studying children, but there is a great gulf between the statistics of the subject and that loving knowledge of child nature which is born of sympathy alone. Without this sympathetic atmosphere, the science of education will beat its wings helplessly in a vacuum.

Contagious Diseases in Public Schools.

(Abstract of paper read by Supt. C. B. Gregory, of Trenton, N. J., before the Department of Superintendence at Chattanooga.)

"I do not take issue, in the slightest degree, with the demand for greater sanitary precautions against the spread of disease. And I concur with especial heartinesss in the increasing demand for medical inspection. Nevertheless, a plea may be made in favor of present conditions not to prove that they are good enough, but to show that they are not as bad as supposed. There is a possibility, that the constant raising of the danger cry may alarm the public to such an extent as to lead to the withdrawal of children from schools. It is necessary, of course, to know how bad affairs are, but it can serve no good purpose to view them as worse than they are.

"For a number of years I have collated the absence of teachers and pupils from sickness, and have obtained some statistics of death. I submit certain figures which seem interesting and offer a few—perhaps crude—inferences. In the year 1895-96 we had in the city of Trenton, a very serious epidemic of diphtheria and measles. On a total enrollment of 8,083 we had 30 deaths, 14 of which were from diphtheria, 4 from measles, and 2 from typhoid fever. Last year, and also during 1894-95, we were free from epidemics.

"The absence during the sickly year was 154 per cent. of the absence of the year preceding and 160 per cent. of that of the year following. This means an enormous increase of absence and a great waste of school expenditure. Stating the facts otherwise: in the epidemic year 463 pupils, or over 9 classes, were absent the entire year. During each of the two healthy years, there were 6 classes of pupils absent the whole year.

"There is a rhythm in the absence of pupils from sickness. January has always been high water mark, except last year, when the maximum absence occurred in February. The regularity of this rule is rather interesting. If we compare September with January during the three years under consideration, the effect of the epidemic becomes very apparent.

"We find that during the epidemic year the absence in January was 670 per cent. that of September, against 300 per cent. and 425 in the other two years. Comparing the three Januaries I find the absence that month during the epidemic year to have been 243 per cent. of that during the same month of the preceding year, and 228 per cent. of the following year.

"The inferences which seem to lie on the surface of the foregoing data are that contagious diseases impair the health of the school children to an alarming extent, and that the schools communicate contagion with fearful rapidity. These are the inferences usually made, and in my opinion they are utterly at variance with the truth. For, the statistics show that the absence of teachers during the epidemic year was also very great, and that it bore the same relation to the previous year and the following year as was the case with the children: in some cases the state of things was worse. But no teacher died of the contagious disease, and to my knowledge not a teacher was sick from diphtheria. In fact, as you well know, that disease does not often affect adults. Now, if the same abnormal degree of absence is perceptible in the epidemic year in the case both of pupils and teachers, it is not logical to assign a reason that does not account equally for both, and the contagion theory meets only one class of cases.

"The following, briefly, are the facts: Absence of teachers from sickness during epidemic year, 194 per cent. and 172 per cent. of the other two years respectively. The figures in the case of pupils were 154 and and 160. Relation of month of highest sickness record to September, 1,811 per cent. in the epidemic year against 336 and 304 in the two other years. Figures in the case of pupils 670, 300, and 425. Relation of

month of greatest absence in epidemic year to same in other years, 184 and 222. Corresponding figures in the case of pupils, 243 and 228. If the absence of the pupils had been heavy and that of the teachers light, I should have been sure that the contagion had been spread in the school-rooms, but the teachers' absence was also heavy, and this absence was not due to contagious disease. What cause can be assigned for the abnormal absence of both classes during this year?

"One more consideration throws a little light on the subject. I have called attention to the rhythm of absence among the pupils. The rhythm is as evident in the rebound of the pupils' health after January, as in the retrogression before January. They recover as quickly as they lose ground, and this is as true in contagious years as in healthy years. The absence in April and May corresponds very closely to that in October and November.

"When you turn to the record of teachers' absence the figures tell a different story. It is less easy to discover a rhythm in this absence There is a maximum of absence, however. It occurs on the average in March. In 1894-95 it was in April; in '95-96 in March; in '96-97 in February. Furthermore, there is little or no rebound.

"In the epidemic year the absence of teachers in April and May was equal to the total absence of October, November, December, and June. The teachers do not recover their health.

"The quick rebound in the health of the pupils contrasted with the failure of teachers to recover, indicates that the cause of absence of both classes should be sought to a considerable extent outside of school sanitation. The pupils' record follows the weather—follows the seasons' changes—and must be due to colds and other complaints consequent on exposure, changes of temperature, insufficient clothing and food, wet feet, and unsanitary homes. The teachers suffer to some extent, but less, from these causes and also from the steady lowering of vitality that goes on through the school year; but the data in no way indicate that the school building is a serious factor. It does not follow, of course, that the adoption of additional sanitary precautions would not reduce the sickness record. Of course it would, just as improvement in home sanitation, better clothing, etc., would reduce the record. My contention is that the school is not responsible for the great sins laid to its charge. My opinion is that for many of the children the school is the healthiest place they find during the day.

"The absence during the contagion year was very great, but the curve of absence follows the curves of absence of other years. It rises higher, however, from the base line. To account for this, we have in my judgment, to consider only three causes: 1. Our sanitary precautions keep out a great many children who live in infected houses and are not sick at all. 2. Parents in epidemic years hasten to withdraw their children on the occurrence of slight colds or other disturbances which ordinarily would receive scanty consideration. 3. The scare, more than anything else, depopulates our schools. It is against that scare and not against proper precaution that this paper is aimed.

"I sincerely believe that our modern schools have very little to do with spreading contagion. We ought not to destroy our school attendance by unnecessary alarms. We divert the attention of the pupils from other possible channels for conveying contagion, which should be equally considered if the school is to receive so much inspection. I refer to Sunday schools and children's parties, in which sanitation is never thought of. During the epidemic in Trenton the health board concentrated its attention on the schools, but never in a single instance considered the Sunday schools. Children came freely from infected houses to Sunday school, and parents who kept their children from school for fear of diphtheria, sent their children to these same Sunday schools to sit by these same children."

Department of Superintendence,

CHATTANOOGA MEETING, FEB. 22, 23, 24.

(Continued from March 12.)

Contributions of Child Study.

An outline of the paper read by Professor J. P. Gordy, of the University of Ohio, was printed in *The School Journal* last week. Dr. Reuben Post Halleck, of Louisville, Ky., gave some strikingly practical suggestions in his paper, an abstract of which will be found on another page of this number.

DISCUSSION.

Prof. Chas. O. Hoyt, of the State normal college at Ypsilanti, Mich., declared that but few doubt that a new science of education is making its appearance. He showed how the system of studying children had revealed the necessity of new methods and plans. He declared that when every common school teacher thoroughly studied and had a perfect knowledge of each one of his pupils there would be a vast improvement in the school work. Thousands of teachers working together along the line of child study, he declared, would eventually bring out a new system. Individual study of every child in a room by the teacher until all are thoroughly understood, was urged by the speaker. Further it was advised that normal schools should cultivate child study and help their students to find the best methods of pursuing it.

THE COMMITTEE ON ELEMENTARY SCHOOLS.

A full statement of the ideas and propositions embodied in the report of the committee on elementary schools, will appear in a later number of *The School Journal*. The committee was appointed at Indianapolis, last year, on motion of Dr. W. N. Hailman, U. S superintendent of Indian education. It is composed of seven numbers: John Dewey, Chicago, Ill., chairman; W. N. Hailman, Washington, D. C.; S. T. Dutton, Brookline, Mass.; L. H. Jones, Cleveland, Ohio; Miss Sarah C. Brooks, St. Paul, Minn.; Miss Sarah L Arnold, Boston, Mass.; Mrs. Alice H. Putnam, Chicago, Ill.

The committee's report was read by Dr. Hailman, and recommended the following plan for carrying out the proposed inquiry into the methods employed in elementary education:

1. The investigation should be undertaken by a committee possessed of complete discretionary power under the limitations of the particular task imposed upon it by your body. This committee should be large enough and varied enough to secure representation to a variety of points of view, not only of pedagogic theory, but of practical experience. Moreover, it should be wide enough to take in the entire country.

2. While a large committee is indispensable, in order to meet the needs outlined above, there should be a smaller central committee, in order that the inquiry may be prosecuted with system and method. This should serve as a directing body from which instructions could proceed, to which reports could be made, and upon which should fall the responsibility of final collation of results.

The committee suggests that a committee of thirteen be appointed, of whom four shall constitute the central committee, the other nine of the committee to be selected as representatives from particular gographical units in such a way as to cover the whole country, each one of these nine to be regarded as chairman of a sub-committee, with authority to appoint district conferences. The inquiry should occupy at least two years, and the possibility of an extension to three should be definitely considered. In order to accomplish this, the National Educational Association should be asked for $2,500.

The committee has been sub-divided, and various portions of the field covering the subject have been assigned to various members.

Dr. Hailman presented for the committee the following resolution:

Resolved, That the present president of the Department of Superintendence appoint a committee of four, to be known as the committee on elementary education, whose duty it shall be to collect and collate data in accordance with the propositions of Dr. Dewey's report.

Resolved, That this committee be empowered to complete

its organization by the appointment of nine additional members in accordance with the recommendations of the same report; and

Resolved, That the officers of the Department of Superintendence are hereby instructed to petition the board of directors of the National Educational Association in behalf of the Department of Superintendence to appropriate a sum not exceeding $1,000 for the year 1898-99, and a sum not exceeding $1,500 for the year 1899-1900, to be placed at the disposal of the committee on elementary education for the purposes named in Dr. Dewey's report.

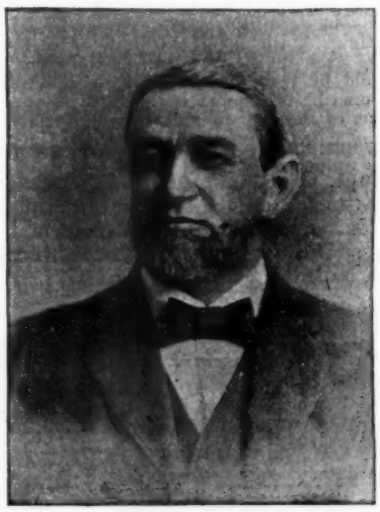
Conference on School Hygiene.

The conference on school hygiene attracted a very large audience. The papers presented were uniformly good, and thoroughly practical. Supt. G. V. Buchanan, of Sedalia, Mo., presided.

LIGHTING AND SEATING.

Dr. W. A. Mowry, of Hyde Park, Mass., submitted a paper on "Lighting and Seating of School-Rooms.' With regard to lighting Dr. Mowry gave an instance of a private school for boys between 10 and 20 years old, in which the following rules were observed:

(1) The light was admitted from one side of the school-room, and that the left side of the pupils as they were seated.



Dr. W. A. Mowry, Hyde Park, Mass.

(2) The quantity of the window glass was 10 per cent. of the surface of the floor. Many claim that the best conditions require a larger amount of glass than this.

(3) These windows were long and high. The school-room was thirteen feet studded. The windows were nine feet in length, and the window-sills, three feet from the floor. This arrangement of the windows made the light far more effective.

(4) There was an entire absence of swiveled blinds. Such blinds are very detrimental to the eyesight.

(5) To these conditions of light were added proper heating, efficient ventilation, and an abundance of pure air.

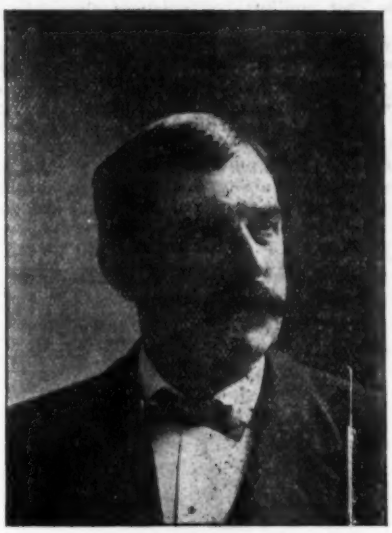
The subject of Dr. Mowry's paper was discussed by Supt. Soldan, of St. Louis, Mo.

The paper of Dr. Marble on "Ventilation of School-rooms" was given in *The School Journal* last week.

CONTAGIOUS DISEASES IN SCHOOL.

Supt. T. A. Mott, of Richmond, Ind., read a paper in which he said among other things;

"State boards of health should be given large legislative and executive powers. Their local offices in cities and counties should be given power to enforce their rules in every particular. School officers should be subject to their direction. A board of health with only advisory powers will be of little value to any community. The laws providing for the quarantining of homes or districts where contagion exists, compelling the cleaning of homes of filth, requiring vaccination of children, prohibiting the use of vaults and cesspools, and other similar laws, are always resisted and disobeyed by large numbers of people, unless enforced by officers of the law."



Supt. E. H. Mark, Louisville, Ky.
President-elect of the Department of Superintendence, N. E. A.

Supt. B. C. Gregory, of Trenton, N. J., read a paper on the same subject, which is printed on another page of this number.

DISCUSSIONS.

State Supt. Inglis, of Illinois, said:

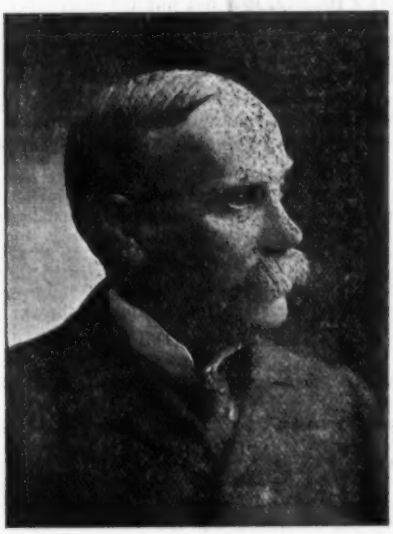
"We well know some of the points of location necessary to secure proper sanitary conditions in the location of the school building:

1. "Elevation in position.
2. "Proper construction.
3. "Position in relation to other things.
4. "General environments.

"All these things are recognized in the expression of our opinions, but we do follow out these suggestions when we project our final actions.

"The school-rooms are often not at all large enough to accommodate the school children who attend in the district. No proper means of ventilation are arranged, for the quantity of air seems to have been a matter of minor or limited consideration, and very soon it becomes exceedingly impure. The process of poisoning now begins. Every hour of confinement of these children in such a room is poisoning the breath, and lessening the capacity of the child to do its work, stupifying its brain power. A broken pane of glass or a weather-board torn from the building is a Godsend to the poor inmate.

"Many teachers do not know, or forget, if they ever did know, of simple contrivances or devices to ventilate their school-rooms, and brighten the future prospects of their pupils, and still the poisoning process continues. And yet, the preservation of health should be of prime importance when

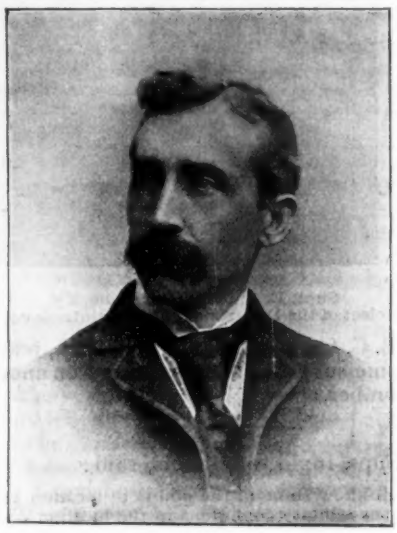


Supt. A. T. Barrett, Chattanooga, Tenn.
Vice-President of the Department of Superintendence, N. E. A.

the erection of a school-house is under consideration. Everything else, cost, comfort, conveniences, should be subordinated to this. Unless the children can be educated in a way compatable with their health, it were better far to tear down our school-houses, at once, and abolish our whole school system.

"The public attention has been called to its necessity in this great work of the school-room, through the school books, through lectures, and in entire treatises, yet often do we see its obvious principles violated in construction of school-houses, churches, and public buildings.

"Absolutely pure air is essential to an absolutely healthy condition of life. Vitiate the air breathed, and you lessen the prospect of life.



Supt. B. C. Gregory.

"There must be an adequate supply of pure air, warm air, and the foul air must be removed, in order to give place to the pure air. This must be done in such a manner as to prevent all draughts that will endanger the lives of the children."

Supt. J. L. Holloway, of Fort Smith, Ark., closed the discussion.

Vacation Schools.

Mr. Richard Waterman, Jr., of Chicago, made a strong plea for the extension of the benefits of vacation schools.

He believed that the effect of vacation upon thousands of children was anything but beneficial. Many children roam the streets of large cities during the summer months, and lose all the benefit they secured during the winter. The vacation school offers a remedy; it is not like the winter school, nor is its work so arduous. Instruction and recreation are so well blended that the pupils really enjoy themselves more than they would remaining idle. The industrial and manual training features were especially commented upon.

The vacation school, Mr. Waterman explained, is the outgrowth of a movement inaugurated in Newark, N. J., under the superintendency of Dr. Barringer. It is no longer an experiment. In Chicago there is a strong sentiment in favor of their establishment and maintenance in connection with the public school system; at present they are supported by private funds. A number of public-spirited women of Chicago, realizing the great and beneficent results of these schools have subscribed sufficient money to maintain them in certain districts the coming summer. The results shown by these schools in Chicago, New York, Philadelphia, Boston, and other places where they have been tried, summed up as follows:

1. "They have exerted wonderful influence upon social conditions.

2. "They have produced a strong public opinion favoring them.

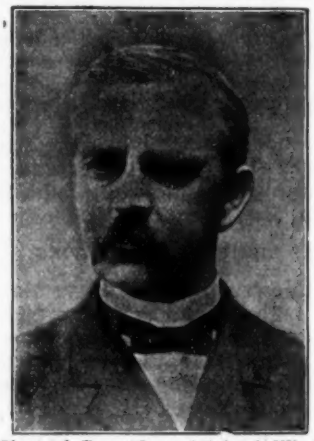
3. "They have had a marked effect upon the Chicago public school system."

Mr. Waterman showed also that these schools are capable of harmonizing foreign elements of the population in crowded tenement districts where many nationalities are represented, and exalting patriotism among the people.

In conclusion, he urged that the movement should be fostered everywhere, and that these schools should be supported by public taxation.

"CONTINUOUS SESSIONS AT NORMAL SCHOOLS"

was the subject of a paper by Pres. Irwin Shepard of the State normal college, at Winona, Minn. Dr. Shepard argued that it is unreasonable to say that a vacation of two or three months is necessary to relieve instructors and instructed from a strain.



Irwin Shepard, Pres. Normal School, Winona, Minn.

The custom of normal schools closing for a long vacation at the same time as other schools is radically wrong. There should be three divisions, of four months each, and at the beginning of each division an entirely different pedagogical branch should be taken up, new pupils admitted, and new classes organized. Minnesota has led all other states in the establishment of summer training schools for teachers.

CONFERENCE OF STATE SUPERINTENDENTS.

State Supt. Grace Espy Patton, of Colorado, presided over the conference of state superintendents.

Pres. Z. X. Snyder, of the State normal school of Colorado, spoke on the "Reciprocal Recognition of State and Normal School Diplomas." He said in part:

State Supt. Grace Espy Patton.

"A majority of the states do not recognize diplomas from other states. There are states in which the law forbids recognition, and a number in which the law is silent. There is a general feeling that there should be recognition."

Among the reasons for the national recognition of diplomas are the following:

"It would be a great convenience to the individual who holds a state diploma to have it recognized in any state. It is a courtesy that should exist among the states. There seems to be a lack of faith in each other's work.

"National recognition would tend to raise the standard of many schools.

"It would tend to professionalize teaching. Professional spirit would become more organic.

"It would tend to vitalize the great army of teachers.

"It would tend to show that we have a common country with common interests.

"There must be a recognition of the labor, worth, and scholarship of a man as determined by his fellows where he has worked."

Summing up, Dr. Snyder urged the superintendents to lend their support to bring about a recognition of state diplomas of all the states by all the states.

Supt. W. B. Powell, of the District of Columbia, submitted a paper on "Medical Inspection of Schools." He said, that from a financial or economic standpoint, the school can well afford the care suggested from the standpoint of prevention, as well as that of therapeutics, which would result from the medical inspection of schools. He contended that medical inspection is a valuable educative instrumentality.

An informal discussion followed.

(To be continued.)

The Romans and Their Works.

By A. J. Gannett, Massachusetts.

AUTHORITIES TO CONSULT.—Jules Martha: "Manuel d'archeologie etrusque et romaine"; Dr. Wilhelm Luebke "History of Art"; John Winckelmann: "History of Ancient Art;" James Ward: "Historic Ornament"; R. N. Warnum: "Analysis of Ornament"; Iconographic Encyclopedia of the Arts and Sciences. The first named work is particularly fine.)

Rome was founded in 753, B. C., probably as a place of defense against the Etruscans,, a people who dwelt north of the Tiber, and the Sabines, who lived south of its upper source. The people who built the city were vigorous and fond of power. They warred upon their neighbors, never making peace except as conquerors, until in 266, B. C., they were masters of Italy. You will remember that there were Greek cities in southern Italy. The conquest included these, but not the valley of the Po, in the north. That was a part of Gaul (now France).

All Italy did not satisfy the Romans. A taste of blood makes the beast of prey more fierce. What Rome had gained made her more ambitious. A long series of wars brought Sicily, the valley of the Po, Spain, Northern Africa, Greece, and Macedon, one by one, under Roman dominion. And finally, during the century before the birth of Christ, Gaul, Britain, and Egypt were made provinces.

At the beginning of our era Rome ruled the world. Greece, with her idealism, had once held a place that Rome never could. The proud "mistress of the world" knew it; and the Greeks alone of her subject peoples were never called barbarians. Perhaps Virgil was thinking of these things when he wrote:

> "Let others better mold the running mass
> Of metals, and inform the breathing brass,
> And soften into flesh a marble face;
> Plead better at the bar; describe the skies,
> And when the stars descend and when they rise.
> But Rome! 'tis thine alone with awful sway
> To rule mankind and make the world obey."
> —Dryden's Translation.

The Etruscans, a people who dwelt between the Arno and the Tiber, were great builders. Their needs and the material at hand made them, in very early times, use the arch much more than any other builders had dreamed of doing. The map of Italy shows you a mountain range running like a backbone through the country. The streams of water that poured down the mountain sides at certain seasons had to be taken care of, else the plains were flooded with stagnant pools, breeding fever and pestilence. The Etruscans learned to drain their marshes. They dug ditches and made long tunnels underground for the waters to flow to the sea.

The sides of a tunnel must be supported. The simplest artificial wall, whether to form a temple, or to frame an underground passage, was that used by the Egyptians and the Greeks; i. e., one made by placing horizontal beams across vertical columns. But in the region of the Tiber there was no granite or marble of which to make lintels—only a kind of soft rock, that hardened when cut and exposed to the air. So the Etruscans fell into the way of using many stones, shaped and placed together in such fashion that they made a circular arch, one of the strongest and most useful of all constructions. Pressure upon it only forces the parts toward a common center, and thus more closely together. They sometimes made pointed arches by laying the stones in horizontal courses, and letting each course extend over the edge of the one below, until at the top the stones of the two sides met. The Etruscans came to understand well the great value of the arch in strengthening walls and bridging rivers, and their Roman conquerors availed themselves of the knowledge. It was left for later architects to learn its possibilities in the way of ornament and beauty.

In the early days the Romans employed Etruscan builders. The Great Sewer (Cloaca Maxima), which drains the lower parts of Rome, was built by them in the sixth century, B. C. It is a wonderful work—a subterranean passage arched over with three courses of stone laid together without cement. It is so large that Pliny, an old Roman writer, says one could drive a chariot piled up with hay into it; and again he speaks of Rome as "navigable underground." The sewer has been occasionally repaired, and is in use to this very day.

From these builders, the Romans probably obtained also what is sometimes called the Tuscan column. It is really a poor imitation of the beautiful Doric order of the Greeks, which had most likely been seen in some of the Italian colonies. Failing to catch the harmony of its parts and proportions, the Etruscans mounted the Doric column on a base, and then shortened it yet more by making the shaft plain instead of fluted. The result is known as the Tuscan order.

Later, as other conquests were made in Africa, Greece, and the East, the Romans became familiar with finer buildings and works of art than they had ever seen before. They were much given to plunder, carrying off home obelisks, vases, statues, and even handsome columns from the very temples themselves. These spoils were not always appreciated. The story is told of one Roman general who, undertaking to ship from Greece a beautiful statue, warned the captain that if the treasure should be marred, he would have to furnish another just like it. That when no one has ever been able to match the work of the old Greek sculptors!

Greek, instead of Etruscan builders, came to be in demand in Rome. Temples were made in Greek fashion and adorned with plundered columns.

Thus we see that Roman art sprang from two sources—one Etruscan, the other Greek. What the Romans obtained from these sources they combined, altered, and finally left prepared to be the beginning of a grander, more expressive style.

As wealth poured into her treasury from the subject nations, Rome spent it lavishly upon public works. Great aqueducts were built to carry pure water to the city from the hills outside. These channels for water were made sometimes of brick; sometimes of stone. They were lined with a thick coating of impermeable cement. Roman cement is so hard and durable that when one tries to break a wall of their masonry the stone itself gives way before the cement. Nothing like it can now be made.

Fig. 1.—A Roman Aqueduct.

If a hill was in the way, the aqueduct was carried through it. Over the valleys it was borne on arches like a bridge. (Fig. 1.) The Marcian aqueduct was thirty-eight miles long. For six miles it was supported on 7,000 arches. Ancient Rome had nine of these artificial waterways to supply her thirst and her great public baths. Only two of them are now used; yet Rome has the most abundant water supply of any city in the world.

Wherever the Romans went, one of their first cares was to obtain a supply of good water. In Spain and France are still reminders of their work. At Nimes, in the south of France, is the finest aqueduct. It is called the Pont du Gard (Bridge of the Gard). The aqueduct is on three rows of arches, placed one above the other. The lowest range has six wide arches; the next, eleven narrow ones; and the third, thirty-seven still narrower ones. The effect of the whole is very pleasing. The palace of the Tuileries shows a similar idea. Evidently the old Roman aqueduct was suggestive to some one.

The streets of Rome were paved with firmly-jointed slabs of stone. And roads were built—roads "sternly straight" and indestructible—extending from Rome in every direction over the provinces. In Italy, in Spain, in France, and even in Britain, a most remote province, some of these roads, made before the beginning of our era, are still in use. Here and there, too, are the remains of old camps. Wherever the Roman soldiers halted, if only for a night, they made a fortification. A ditch twelve feet wide and nine feet deep was dug around the camp. The dirt thrown out was made into an embankment, and stakes pointing outward were driven thickly into the wall. In "Tom Brown, of Rugby," you remember Mr. Hughes tells about finding, at the top of a hill, "a magnificent Roman camp, with gates and ditch and mounds, all as complete as it was twenty years after the strong old rogues left it."

The grand period of Roman art was during the first century B. C. and the first century A. D. Then marble was brought

Fig. 2.—Roman Composite Order.

from many parts of the world, at great cost. One hundred and fifty sorts have been counted in Rome itself. There are white marbles, gray, rose-colored, black, greenish, yellow veined with black, and many tints and shades. At one time many thousands of captives were condemned to work the quarries of the Grecian islands and of Asia Minor, that the supply of marble might not fail. It became the fashion to face the buildings of brick or stone with these beautiful marbles.

Their temples were never the best specimens of Roman building. They were often of great size, compared with those of Greece, and showed the fondness for lavish display that stamps all Roman work. The Greek Doric, Ionic, and Corinthian columns were all made use of, the rich Corinthian order which the Greeks liked best of all being a favorite with the Romans. The Tuscan column was also used; and a composite order which the Romans themselves made by combining two of the Greek orders. (Fig 2.)

The Pantheon is the temple we hear most frequently mentioned. It is a large, round structure, with a rectangular porch, upheld by Corinthian columns. The floor is paved with squares and rounds of porphyry and granite. The roof is dome shaped, with an opening at the top twenty-six feet wide. "It seems as if heaven were looking down into the interior of this place of worship, left unimpeded for prayers to ascend the more freely." (Hawthorne.) This temple was built in 26, B. C., as a part of the baths of Agrippa, but was finally dedicated, with the tolerance of indifference, to all the gods of the conquered nations.

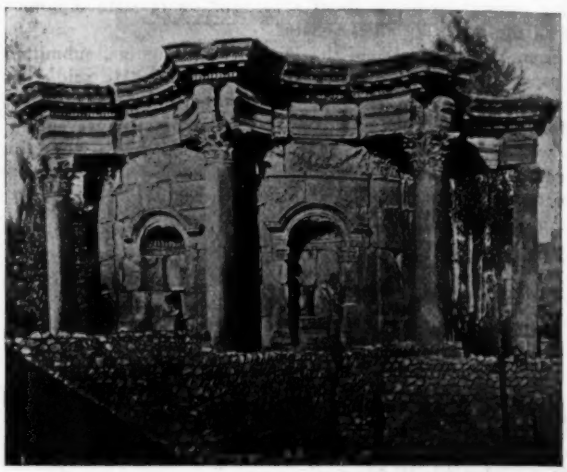


Fig 3.—Roman Temple in Baalbek, Syria.

Fig. 3 shows a circular temple in Baalbek, Syria, built by the Romans. Do not think all their temples were round. It was simply a plan that had never been used much before.

The basilica was a building that belonged peculiarly to Rome. It arose from the need of having a large covered place for public business. It was the custom in Rome for the citizens to meet from day to day in the Forum, a square in the heart of the city, to talk over public affairs. There was the high court of justice. There, in shops, beside the Forum, were the bankers and brokers. The markets were there. Traveling merchants brought their wares to this busy place. Idlers spent hours there; all this under the open sky, with no protection from sun or rain. At last, in 185, B. C., Porcius Cato, Censor, wishing to make himself popular, built in the Forum an immense lofty hall that was open to every one. The plan of the hall was rectangular. Two long rows of columns divided it lengthwise into three aisles, the middle one being widest. At one end of the central division was a semicircular, raised platform, where the high tribunal sat. The business formerly done in the Forum was now done under cover, in the basilica. It was so convenient that others were made in different parts of the city. Some of them were very rich and beautiful, with marble pavements and handsome columns. When the early Christians wanted to make churches, in which great numbers could worship, they took their plan from the old Roman basilica.

The Romans were always fond of public shows and entertainments. In the earliest times, under Etruscan influence,

Fig. 4 —The Colosseum.

they laid out the Circus Maximus in the long, narrow valley between the Palatine and Aventine hills. Cæsar re-built it and made it large enough for 150,000 spectators. It was a place for

games and for horse and chariot races. When, in 27, B. C., Rome became an empire, places of amusement were more and more frequented. Deprived of wholesome interest in affairs of state, the people fell back upon pleasures.

Cruel contests between gladiators, and between men and beasts, were favorite pastimes, and for these the great amphitheaters were made. Ruins of more than sixty may be seen in different parts of the ancient empire. The finest of them all is the Colosseum. (Fig. 4) It is elliptical in plan. Outside one sees a high wall, with eighty arches in each of the first three stories, topped by a fourth story, that looks very high and plain. The lowest story is ornamented with Doric columns between the arches. They are engaged columns; i. e.,

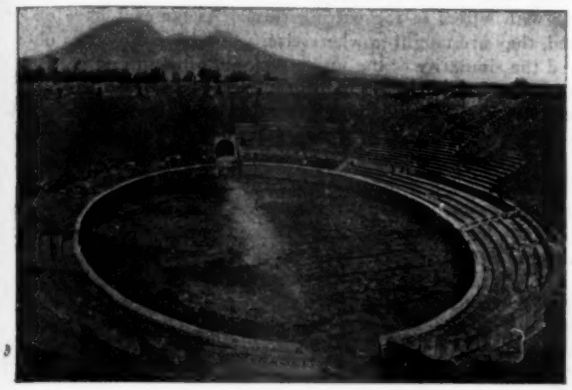


Fig. 5 —A Pompeiian Amphitheater. Vesuvius in the distance.

fastened to the wall on one side. The second story has Ionic columns, and the third, Corinthian. The fourth story has half columns of the Corinthian order. This combination of columns and arches shows plainly enough that the Romans had no conception of the æsthetic possibilities of the arch. They used it for strength; and, to make it look well, added a column outside on the pier.

Standing inside the Colosseum, in the arena, the seats rising tier above tier, look like coins of different sizes, laid one over the other. (Fig. 5) There was a silken awning over the heads of the spectators. If you look closely at Fig. 4 you will see the holes through which the poles that held the awning, passed.

The wonder of it all is its great size and perfect suitability to the purpose for which it was made. Figures are not very satisfactory. It may help to recall that this building is 620 feet long and 513 feet wide. Emperor Titus brought home from the conquest of Jerusalem 12,000 captive Jews to work on the two upper stories, which his father, Vespasian, had left unfinished. Sufficient material for two of the grandest palaces in Rome and for St. Mark's Cathedral have been taken by

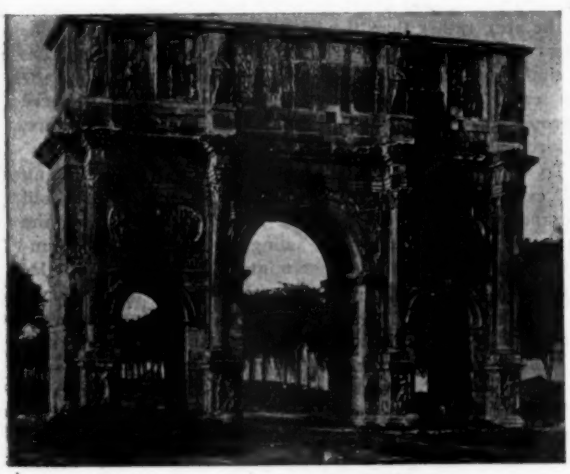


Fig. 6.—The Arch of Constantine.

order of the popes from this old pile, and still what is left compels admiration because of its great size. Do you wonder that the Romans made it so large? Their city had then a population of 2,000,000. An amphitheater that would seat 100,000 was most likely needed. But for the power afforded by the arch, and the wonderful skill the Romans had in mason work, such a building would have been impossible.

> "Arches on arches! as it were that Rome,
> Collecting the chief trophies of her line,
> Would build up all her triumphs in one dome,
> Her Colosseum stands."
>
> —Lord Byron.

One is sure to see in any book about Rome, pictures of triumphal arches, and of tall pillars, with a statue on top. These were set up by the emperors, to commemorate some great victory. Usually on the pillar or arch there were pictured, in bas-reliefs, the story of the wars in which the hero distinguished himself. A portrait statue of the hero himself was set up on top of the whole. Fig. 6 shows the arch of Constantine. The statues have been removed from the top.

Most of the sculptured works of Rome were Græco-Roman. What she knew of that branch of art Rome learned of the Greeks; and much of the work was done by Greeks who tried to please Roman patrons. Instead of idealizing the model, the Roman fashion was to copy it exactly. Great care was taken to make the face expressive; and every minute detail of robe or fringe must be executed with utmost precision. The results are fine, but lack the power of Greek works of the elder time. "The Greek portrait was an ideal form, of which the actual was only a shadow."

In Roman ornament we find nothing really new except the shell, which appears for the first time on the Arch of Titus. Do you find shell ornaments on the Syrian temple?

The Romans used the old patterns, changing and enriching

Fig. 7.—Cornice from Temple of Vespasian.

them. The acanthus and scroll were always favorite decorations. The carvings were made with fuller curves, so that they stood out more boldly. Notice the egg-and-dart design in Fig. 7. The richest Greek ornament was plain beside the Roman. On everything she touched, Rome left her own unmistakable mark—the stamp of power, love of greatness, and barbaric fondness for display.

Spring Has Come.

Spring has come back to us;—beautiful spring;
Bluebirds and swallows are out on the wing;
Over the meadows a carpet of green,
Softer and richer than velvet is seen;
Up come the blossoms, so bright and so gay,
Giving sweet odors to welcome the May;
Sunshine and music are flooding the air;
Beauty and brightness are everywhere.

—Primary Fridays.

Dandelion.

There's a dandy little fellow
Who dresses all in yellow;
In yellow with an overcoat of green;
With his hair all crisp and curly,
In the springtime bright and early,
A-tripping o'er the meadow he is seen.

—Nellie M. Garabrant.

Vertical Writing. V.

By E. W. Cavins, Illinois Normal University.

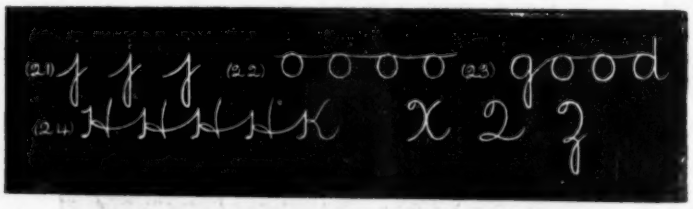
Many teachers take up the letters in alphabetical order, a plan which is not practical. The classification followed in this series gives the letters in the order best suited to systematic instruction for the following reasons:

1. Knowledge of the correct forms can be gotten more readily if similar letters are grouped and studied together.

2. Writing is a physical habit which results from practice. Get the skill for making one letter and it serves in writing others that are in any way like it in form. Classification shows the common element, which should have the greater share of practice. Thus, from the classification, the special object of practice may be determined.

A class of letters next in importance to the upper loops, considered in *The Teachers' Institute* for January, is the lower loop division. This group includes j, y, g, and z. The appearance of a page of writing depends, in great measure, on the way in which the upper and lower loops are made, because, on account of their extension, they are the more conspicuous.

The lower loop is but the upper loop inverted, yet skill in making the upper doesn't mean skill in making the lower, any more than the ability to stand on the feet means the ability to stand on the head. In the lower loop the downward stroke is straight; the upper stroke a left curve.



None of the lower loop letters combine easily in a movement exercise, hence, it is better to take them singly and in words.

Make j with a quick, but not jerky, upward and downward movement. Put curvature in the first stroke and avoid the common fault of curving the downward stroke to the left by placing the arm in such a position as will allow free movement below the base line.

Notice that width of loop is due to curvature in the upward stroke, rather than the downward. The upward stroke should cross the downward at base line. Rest the eye on that point, and try to carry the pen through it, as you look at the head of a nail and aim to hit it with the hammer.

Doubtless we all have seen j, y, g, and z written with only a stem—a single straight stroke—extending below base line. When made thus they are much more simple and more easily written, since the upward stroke of the lower loop is by far the most difficult part of it.

You will do well to notice that many of the letters may be written in various ways, and that equally well, to suit various people. Sober common sense should guide one in selecting the styles he will practice, for a handwriting cannot, like a suit of clothes, be put on and off at pleasure. Generally, the style one adopts clings to him through life.

Review a and v, then write g and y. Write many small words which use lower loop letters as initials.

Exercise 22. Here is a valuable exercise. Roundness is a general characteristic of vertical writing; get skill for that feature by much practice on the small o. Write the o symmetrical, and close it neatly at the middle of the top. Give attention also to even spacing. Write four or five letters in a group, four or five groups to a line, and at the rate of four or five lines a minute.

Write such words as "good," "boom," and "moon" at the rate of from twenty to thirty a minute.

Besides specializing on certain letters and groups of letters, progress may also be made in learning to write by attending to characteristics of good writing, which are more general. While working on the loop letters, teach pupils in their body writing to shorten all stems and loops. Set this up as a particular aim; ask pupils to write at the top of the page before preparing their written work, "Aim: Short Stems and Loops." Then, if you have that most potent and desirable of all the teacher's qualifications, influence, results will follow in the line of that aim.

Skill in writing figures should be acquired, as well as in writing letters, since their constant use is demanded in a practical way. They are simpler in construction than letters, and fewer in number, hence, more easily mastered. Some may question whether the forms of the figures should be taught along with letters in the writing class. As far as I have observed, they are taught nowhere else. You have doubtless observed the similarity of the forms of some of them and certain letters. Capital Q and 2 differ only in size; small o is almost exactly like zero; the upper part of 7 is what many people make for the upper part of F; omit the upward stroke of 8 and you have one style of capital S; 9 is an abbreviated g.

Each of the figures may be made to some count, and counting facilitates class work. By practice, you will readily observe that 1 and 0 may be made to a count of one; 9, 6, 2, and 7 to a count of two; 4, 8, 3, and 5 to a count of three. An excellent substitute for counting—so excellent that it is much to be preferred—is instrumental music, on the piano, organ, or on some stringed instrument. The inspiration of the music gives the writing exercise a genuine delight. March or galop time is suitable for 9, 6, 2, and 7; waltz time for 8, 3, 4, and 5. Try the experiment, if you have never done so. Begin with the 8; make the downward stroke (which is the one most curved) on the first and second counts, and the upward stroke on the count three.

On a test of speed one hundred each of the simpler figures, or seventy-five of the others, can be made in a minute. In such tests, counting or music should be discontinued. Here, as in writing letters, the results to be obtained are good form and rapid execution with free movement.

C. P. Zaner, of Columbus, O., is, to my thinking, the best authority on penmanship with which I am acquainted. Believing that readers of *The Teachers' Institute* who are trying to become good writers and teachers of writing would be greatly benefited by some of his common sense doctrine, I quote as follows:

"Writing—the art of forming characters—involves more work than is generally believed. Careful, intelligent practice is the real secret of good, plain, rapid writing. Learning to write involves the forming of good or bad habits; nothing more nor less. But little theory is necessary.

"If you desire to write well, but not rapidly, use the fingers considerably. If you desire to write well, rapidly, and easily, use the arm, rather than the fingers, to propel the pen. The fingers may be used, but not enough to tire seriously. Let the elbow serve as the center of action and the forearm as the chief lever. The fingers in themselves are too small to serve as propelling levers for rapid, continuous writing; therefore, get force and freedom from the arm.

"To cultivate this freedom, make the traced and running oval exercises very rapidly, over and over, hundreds and thousands of times, until you can make them well with the arm movement (the fingers not acting) at the rate of one hundred or more down strokes per minute. Master the muscles by learning to make the exercise well. The forms produced will show how orderly the movement is. Nothing but well-willed repetitions will make the movements and forms better.

"Next, study and practice carefully the letters, that you may get correct ideas of good forms. Folow this with a thorough drill on each letter, taking one at a time and filling page after page, using a free arm movement. Never go from one letter to another till you have made some improvement in form and movement.

"Study spacing, joining, angles, turns, curves, modifications, and styles. Avoid tendencies toward illegibility by making turns where there should be turns, angles where there should be angles, and loops only where there should be loops. Use good, every-day common sense for theory."

Spring Awakening.

SEEDS AND BUTTERFLIES.

By Ruth R. Mantz, California.

The children listen to a story of some tiny folks who sleep all the long winter in brown nightgowns, buttoned up tight and warm. Ever so many of them sleep together, in a great, big, brown bed. Sometimes they have a warm, white blanket, that covers the whole bed. After the winter time of sleep is over, some little friends come to awaken these children. They are the same little friends that waken us, "when we're softly sleeping." They shine right down on the queer little children and wake them up.

They make them feel so warm and happy that they begin to stretch, as though they were about to get up, and throw off their brown nightgowns. There are some other little friends who come down and tap, tap, on the big brown bed. They even touch the funny little people, and say, "Get up, little folks, it is time you were up and had on your bright, spring clothes. We'll give you a drink, and that will make you feel more like getting up." So the queer little people begin to take off their brown night-dresses and lay them aside. Then they put on their little new green dresses, and the first thing you know, they peep out of doors and look around at the beautiful world. And they find all the world seems to be waking, and coming out in bright, new spring dresses. Their own dresses seem to grow more lovely every day. And their neighbors look so beautiful and happy, and the sunshine is so bright that they say to each other many times, "Could there ever before have been anything so beautiful and full of joy?" And they call to some of their brothers and sisters to hasten, and get on their new dresses, and come out to see how beautiful and full is the world above and around them.

When the story is finished, the teacher asks, "Who are these queer little people? I'll show you some of them." Brown seeds are then shown and discussed, the children discovering the different things referred to in the story. We classify seeds and put them on damp cotton, that we may watch them throw off their brown night-dresses and put on their beautiful green ones. The children are now ready for Miss Smith's song:

"To the great brown bed
Where the flowers sleep,
Came the rain with its tap, tap, tap,
And whispered, 'Violet, snowdrop, and rose,
Your pretty eyes you must unclose
From your long, long winter nap':
Said the rain, with its tap, tap, tap."

A day or two later we have one verse of the spring song:

"Awake, says the sunshine, 'tis time to get up;
Awake, pretty daisy, and sweet buttercup,
Why, you've been sleeping the whole winter night,
Awake, and come out in the sunshine as bright."

On the teacher's desk we have hyacinths, daffodils, and other spring flowers, which we have been watching come out. The children see they have six points. We intend to make a flower bed for spring flowers, so we decide to make it the same shape as the flowers. We take six one-inch sticks for the center, and make it as nearly like a ring as possible. This, of course, results in a hexagon. With two-inch sticks we make the six points around the center. We place the seed lentils to show where we mean to plant our flowers, and take care that the garden is symmetrical.

During "rest" time we have the children try different ways of making seeds. They fold themselves up into a position from which they can easily rise. One child arranges them in a bed. Here, again, the point of symmetry is made. Other children are sunbeams, to awaken the sleeping seeds. We have the same music as before for sunbeams. The little seeds begin to awaken very slowly, and gradually unfold, coming up on their knees, with their hands uplifted, for the flowers opening out. During this movement we sing Miss Smith's spring song, with a few necessary changes:

"The little flowers come from the ground
In the spring-time, in the spring-time,
They raise their heads and look around
At happy spring, spring time.

And every little flower doth say,
'Be glad and full of joy to-day!
For all that sleep shall wake again,
And spend a long, glad, spring, spring day.'"

Another day the raindrops are added, children running softly to the sleeping seeds and tapping them to wake up. This is accompanied with music suitable to the thought of tapping softly.

THE BUTTERFLY.

Our next topic of conversation and story is the awakening of the butterfly from the cocoon. We have several cocoons which the children look at carefully. We find it a funny, little brown house, in which is an odd little person fast asleep. They are interested to hear more of this little person, who has been asleep all winter. They are told it was a caterpillar crawling around on the trees last fall. One day it set to work and spun itself this little brown house, with a bed and a warm blanket in it. Then it covered itself up warm, and went fast asleep till its new dress should be ready.

All winter long it slept in its comfortable bed. At last, one day its beautiful new dress was all ready; it waked up, laid aside its brown nightgown, and came out of its dark house into the bright, sunshiny, spring world. The flowers were all in bloom; the birds were singing for joy because everybody was waking up; and the caterpillar looked around at all the beautiful things. Then it looked at its own clothes, and saw the most beautiful thing of all. Its new dress was two spreading wings of the prettiest colors. Then it knew it would never have to crawl any more, but could lift its wonderful wings and fly away to the lovely flowers, and among the trees, everywhere, just like the birds.

(For seatwork we make, with the different kindergarten gifts, cocoons, butterflies, gardens in which the butterflies can fly, etc.)

Blueprints as Aids to Nature Study.

By Frank O. Payne.

Much has been written of the value of photography in nature study. The "Solandi process," (Sol and I) as the name implies, consists of laying the object to be printed upon the ordinary sensitized paper and then developing, as if it were a negative.

The use of blueprint paper instead of the regular photographic paper is very much to be preferred, because any one can finish the prints in a few minutes.

To use the blueprint paper in nature study, the following plan is recommended. Let it be desired to study leaves or flowers.

First, lay the object upon the paper, being sure that the plant is perfectly dry. Place over it a plate of glass, to hold the object down firmly upon the paper and expose to the direct rays of the sun. Let it remain there three or four minutes, or until the exposed parts of the paper are of a bronze color. Then remove, and quickly place the paper in a vessel of perfectly clean water. Keep covered with water for at least ten minutes, being careful to change the water two or three times. Then remove from water, and dry between blotters.

A little practice will enable the operator to take excellent prints of almost any part of the plant.

When the prints are dry, they should be spread on a drawing board, and a piece of tracing paper should be laid over, and the outline of the print taken off with a sharp, soft pencil. Transfer this tracing to drawing paper, end either line it in with colored pencils, ink, or water colors.

There is a great advantage in this matter of tracing the outline of these blueprints. The eye does not take in all it sees. Many features of an object take no hold on the consciousness of the pupil. Many of these details not seen by the eye in the object itself will be detected when the hand traces around it.

I do not consider this method of any great aid to drawing, but it is certainly of great assistance in nature study.

The results which have been obtained in some schools are indeed marvelous. Pupils under the writer's instructions have taken excellent blueprints from grasses, ferns, and other delicate things.

Blueprint paper is inexpensive, and can be had at any art store or architect's office; but an especially fine and sensitive quality is procured from the Philadelphia Blueprint Company.

Another reason for employing this means of delineation is found in the fact that children are always interested in chemical action, and printing of this kind opens up an entirely new field of research to the pupil.

The Teaching of Reading.

By Frank M. McMurry, Teachers' College, Buffalo, N. Y.

The most striking defect in the teaching of reading to children from seven to twelve years of age is the lack of a high standard of reading. I recently observed several recitations in which this plan was followed: Each child was allowed to read, and at the close of the lesson a careful reproduction of the subject-matter was called for. Then came the question, Did he omit anything? Usually the children were also asked to tell what they had learned from the lesson in the way of a moral thought. During the reading itself the work of the teacher consisted almost entirely in pronouncing these words that caused the pupils to trip. My experience leads me to consider this instruction a fair average, so far as excellence is concerned. The outline of the plan is quite definite; viz., reading on the part of the children, careful reproduction, and some discussion of the moral, if there is one. There are some merits in this method, undoubtedly, because by it children learn to read for thought; but instead of learning to express this thought orally, they are receiving a drill mainly in pronouncing words. Such instruction does not enable them to read well, or to enjoy reading to the right degree.

As said above, the first lack here is the absence of any high standard; especially a high ideal as to the purpose of reading. Both children and teacher feel that they are doing well enough if the words are fairly well pronounced. Suppose, however, that the teacher is aiming continually to have the child-en express the thought of the printed page so naturally that a stranger, with his back turned to the class, could not well distinguish whether the pupils were relating a story or reading it from a book. This is indeed a high standard for school instruction in this study; but if the grade teacher or the country teacher would keep in mind that her children should read just as they would speak, her teaching would be greatly improved. Of course, the pupils, as well as the teacher, should have a very clear idea of the kind of reading to be aimed at, and for that reason it would pay often for her to turn her back upon the class, and have some of them either speak or read, as they choose, in order to see if she can note the difference. She will not always be able to distinguish this, for quite a number of children can read beautifully when aided by such a clear notion of what is wanted.

Accepting this as the teacher's standard in reading, many influences will follow upon her method of instruction. In the first place, she will watch and correct the tone of voice in which children read. Ordinarily, they have two tones. One is the natural one in which they speak, and the other one is the unnatural, or reading tone. This is easily noticeable when one of them, after conversing with the teacher about the page, etc., suddenly begins to read. He almost invariably lifts his voice, and often several notches. When their attention is called to it, I have often seen them greatly amused at the ridiculously high tone. As soon as a child has learned to repeat the words of a book in his natural voice he has made a great movement toward good reading. This is one point, then, that both teacher and pupils should keep in mind and often mention in class. The use of the above-mentioned test, too, is a happy way of recalling this important fact.

This same test, further, condemns strongly the ordinary monotone in which children read. While boys and girls upon the playground raise and lower their voices continually, in the reading class they easily acquire an inability to secure any such variation. But if one is to read just as he would speak, this inflection is in demand. The teacher can make use of two important means to meet the need. One is to select dialogues as the subject-matter to be read. The questions and answers back and forth make it easy to secure some modulation. But this means alone is insufficient. As a rule, the questions which the teacher puts must be a still more important means through which children learn to modulate their voices well. For instance, take the following text to be read:

"A fox once met a stork, and invited him to dinner. 'With all my heart' said the stork. But when at the home of the fox where dinner was served he was not so happy. The fox had fine hot soup, but he served it in shallow plates."

In order to avoid the monotone in reading this text, such questions as the following might be put: Was the stork glad to go, or not? Show it by the way you read it. Was the soup good? In what ways was it good? Then show that it was excellent. In what would you have expected the fox to serve the soup to a stork? What *did* he use in which to serve it? Now read it. Do you think he used soup plates for the soup? Now read it again.

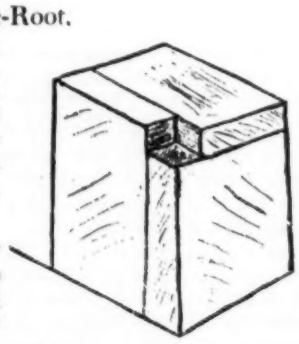
In this way children are forced to throw emphasis upon one or more words in the answers they give, and they are inclined to carry this emphasis over into the reading itself. Thus they fall into the habit of reading somewhat more as they speak, lifting the voice or lowering it, giving stress here and there, lengthening words for emphasis, etc. The very pointed questions of the teacher can be of great help here.

The third factor in good speaking is a clear enunciation of the individual sounds. Of course the vowel sounds are very often mispronounced. I recently found in one class the word "poor" pronounced "pore"; "for," "fur"; "where," "whur"; "took," "tuk." In spite of frequent pronunciation of the word "wash," the children almost invariably said "warsh," and they seemed unable to make the correction. But the vowel sounds are not the only ones that need to be corrected. A clear enunciation of consonants is probably more essential to good speaking than that even of vowels. These children were learning both to speak and to read with, frequently, an utter neglect of the consonants. For instance, the final d was omitted in the words lived, moved, drowned. Forest was pronounced as though it was a word of one syllable. The final t was entirely omitted in swept and slept. A class of six-year-old children could scarcely be persuaded to say, "Hens lay eggs," although I drilled them upon it. They said, "Hen lay eggs." If the instructor would drill the children upon consonants, especially final consonants, and emphasize that feature of speaking, she would greatly improve the quality of reading of her pupils.

We see in what has been said the wonderful influence of a very clear aim in all fields, both of business and of teaching. One is greatly affected by the clearness and definiteness of the end to be attained. A clear aim is a standard for measuring the worth of every piece of work to be attempted. In the case of reading, if the teacher and children can agree that they should read just as a well educated person would talk, the pitch of the voice, its inflection, and the pronunciation of vowels and consonants would be greatly improved, and better reading would be the result.

Cube-Root.

I use a simple geometric method in teaching cube-root. The accompanying drawing illustrates it. To the original cube are added three regular oblongs of equal size and a small cube completing the cube, as, to find the cube of 35 =



$30^3 = 27000$

$3 \times 30 \times 35 \times 5 = 15750$

$5 \times 5 \times 5 = 125$

$35^3 = 42875$

In extracting the cube-root of a number, as: 74,088 =

	74,088	40
Largest cube that can be taken out	64,000	2
Leaving additions amounting to	10,088	24

Trial divisor is $3 \times 40 \times 40 = 4800$ because three additions of approximately that size are to be made. By dividing we see that 2 is the thickness of the additions. Then they are exactly $3 \times 40 \times 42 \times 2 = 10080$

$2 \times 2 \times 2 = 8$

10088 | 10088

So we find the cube-root of 74,088 to be 42.

I have found this an easy method to teach, especially if blocks are prepared to illustrate. They may be of paper.

Tripp, S. Dak. Chas. V. Billman.

Violets and Daffodils.

Sweet little violets, hid from the cold,
Put on your mantles of purple and gold!
Daffodils! daffodils! say, do you hear?
Summer is coming and springtime is here.

—E. P. Muller.

The School Journal.

NEW YORK & CHICAGO.

WEEK ENDING MARCH 12, 1898.

Many teachers have their pupils keep an observation book in which to record what they notice on their strolls along nature's highways and byways. Spring is an excellent time to start a book of this kind. Children will thank their teachers for every encouragement in this direction and their observation book will be valued as a rare treasure. Let them note the lengthening of the days, the difference in the sun's shadows, the swelling of the leaf buds, the arrival of the various birds, the songs heard morning and night, the building of nests—there is no end.

Every discovery means to the child mind the opening of a door into new wonderlands. The freshness of the child's observations, unspoiled and unconventionalized by text-book nomenclature, lends a charm to his records that will amply repay the teacher for the slight expenditure of work involved. The child eye often reflects nature more truthfully and more beautifully than the scientist with scalpel and microscope.

What effect has teaching upon the teacher? It is supposed it has a good effect on the pupil. Can it have a good effect on the pupil and a bad effect on the teacher? St. Paul hints that it is possible for one who preaches to others to be a castaway himself. What is the teacher aiming at, knowledge or growth? Can he aim at increasing knowledge in the pupil and not know more himself? Can he aim at founding character and not have a stronger character himself?

Suppose the teacher considers the case of the teachers he knows, in order to find out what the effect of teaching is; or rather to find out what condition the teacher allows it to leave him in. He will agree that very many begin to give up student life and habits soon after "getting a position;" that a state of mind ensues that yields little happiness, rather the reverse, and then comes the feeling that teaching is not a good business. Is this the correct conclusion?

Method is only a mere means to an end; nothing more. The teacher is apt to forget this. Let him examine himself, and if he finds that one favorite method is his guiding star, he had better lock it in a strong box and hide it in a secret drawer for a few months, and study and apply some new one. Much has been gained for the little child through the study of modern methods, but there is a possibility of harm. A child who, without hesitation, will state that a family of four can have three oranges apiece out of a dozen should not be obliged to begin at the beginning of number because he cannot, in a parrotlike manner, repeat, "There are two twos in four." And when a child has been taught to read at home by the old-fashioned spelling method, and *can read*, must he begin in the lowest primary because he does not understand phonics and script? And yet, many primary teachers in practice insist upon just this. Stop a moment and think; do you make change by the Grube method, and do you read the morning paper by the phonic? Method fetichism must go.

Editorial Letter. II.

I am a thousand miles nearer to Cuba and in a seaboard town where there is daily communication with Havana; of course there is much said here as to war. The sober-minded people, however, here, as elsewhere in this country, are opposed to war. There is a large element among us that want to shoot somebody as soon as anything happens. America produces over 7,000 homicides annually; she lynches over 800 negroes annually—in short, America with all its religion and education is reckless of human life; our readiness to rush into war is to be deprecated.

The thought that should be uppermost in the mind of every teacher in America to-day is this: "I will discourage this readiness to rush out and shoot somebody as a supposed remedy for the destruction of human life that has occurred." Not long since an account was printed of a pupil in a school drawing a pistol and shooting the teacher for having forbidden him to sit in some particular seat. Do not let us shut our eyes to the uncivilized, unchristian spirit that is abroad in the land and that is in control, even of the older classes in the grammar schools. The teacher thinks they have imbibed the spirit of the refined literature of the century, but instead of that they have the spirit of the newspapers whose business it is to excite human passions in order to sell their wares.

There has been enough destruction of human life in Cuba; let the destruction there not excite us to want to have more human life destroyed. Let the teachers take firm ground on this question the schools rightly encourage patriotism; there is a supposition on the part of boys that a murderous spirit is patriotism. Let the matter be made plain. Cuba has been wronged; but we cannot right every wrong; Spain has shown a wicked and tyrannical spirit; to kill 1,000 Spaniards will not correct this spirit. In our Revolution, England was tyrannical, but no nation except France aided us, and she did it because she was at war with England. In the Armenian slaughter no nation intervened except by argument as we have in the case of Cuba.

The position of the American government deserves high praise; it should be explained to pupils; we have taken a consistent and dignified stand; so we did in Mexico; so did England in the late civil war. These points I have brought forward because in several western papers I see such a notice as this: "The students in our school are ready to volunteer; some are drilling after school." In one case a teacher is said to have asked, "What would you do with the Spaniards?" and the reply was, "Shoot 'em." My purpose is not to present arguments as to the merits of the case; but to urge the teacher to make the occasion one for the practical exemplification of the divine words, "Blessed are the peacemakers.' The American people are not a specially happy or blessed people, though they have so many of the comforts of life. Let the teacher determine that he will make it plain that war must be taken up as a necessity, not as a pleasure.

Last year I heard Booker Washington deliver one of his solid addresses at the North; he has at Tuskegee, Alabama, over 1,000 students to feed and educate; but so common sense are his ways and words that $50,000 are annually contributed. He takes the impregnable ground that the negro needs to make physical or industrial progress, first of all; this is the door by which the white man gained his eminence. Mr. Washington gathers the people around him from a large section in the spring, and tells them what to do; each year they are plainly better off. This year he emphasized the point that they must have something to sell, corn, cotton, pork, poultry, eggs, etc. He is an inspiration to the colored race.

I advocated the starting of an industrial school for the negroes here in Jacksonville, on my first visit in 1886, and State Superintendent Russell entered into the matter with his accustomed zeal; one was opened in connection with the large graded school. It has failed and gone out of existence because no suitable teacher was employed, only an ordinary carpenter. It is an exemplification of the old tradition, "Anybody is smart enough to keep a school." I really think it takes more ability and training to fit a man to impart industrial skill than to secure good lessons in grammar. It does not take a very smart person to ask the questions at the bottom of the page.

The weather here has become very warm, 70°, and even higher.

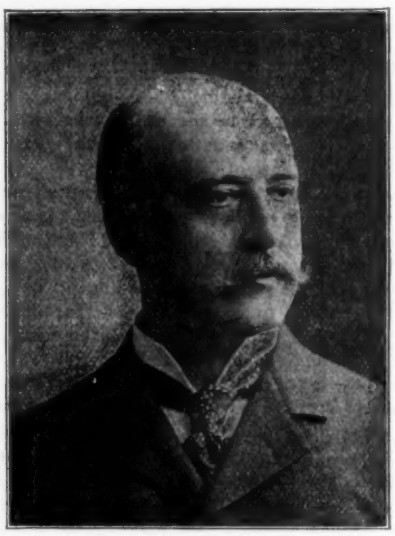
A. M. K.

Jacksonville.

New York City.

Dr. William H. Maxwell was elected superintendent of the public schools of Greater New York at the meeting of the board of education Tuesday afternoon. Dr. Maxwell has been superintendent of Brooklyn schools since 1882. He received 11 votes of the 19 cast by the board, 6 going to Associate Superintendent Seth T. Stewart, of the borough of Manhattan-Bronx, and 2 to Dr. Walter B. Gunnison, principal of Erasmus high school, Brooklyn. Supt. Maxwell was then formally introduced, and took his seat in the board of education, where he will have a voice, but no vote. His salary was fixed at $8,000 per annum.

Mr. Maxwell was nominated by Commissioner J. Edward Swanstrom, and his nomination was seconded by Commissioners Henry W. Taft and John G. Agar, of Manhattan-Bronx. Mr. Swanstrom said that he had helped to elect Dr. Draper at the preceding meeting of the board, and no one regretted more than he Dr. Draper's inability to accept the position. He knew of "no man more eminently fitted, by experience, education, temperament, professional training, character, and scholastic attainments to fill the place declined by Dr. Draper than William H. Maxwell, of New York city." He described Mr. Maxwell as a graduate of Queens college, Ireland, who came to this city twenty-five years ago, and began work as a newspaper and literary man. In 1882 he was elected as superintendent of Brooklyn schools, his successful administration resulting in his repeated re-election to that



William H. Maxwell.

office. He characterized Mr. Maxwell as "a public officer of the highest type, absolutely honest, and independent, having the courage of his convictions, of phenomenal capacity for work, earnest and sincere, yet appreciating the necessity of keeping the due balance between the practical and the ideal, and as firmly believing in the high school, kindergarten, and manual training as necessary parts of modern public school education. He is supported by the great body of earnest and efficient teachers in Brooklyn, who honor and respect him."

Commissioner Taft, in seconding Mr. Maxwell's nomination, said he represented the most available candidate embodying the ideals for which the reform board of Manhattan-Bronx have for two years been laboring to carry out in New York schools.

Commissioner William Greenough, of Manhattan-Bronx, nominated Seth T. Stewart, whom he described as a distinguished graduate of Yale college, having taught for twenty-five years in every grade of school. He came from Brooklyn with recommendations of the very highest character, and his record in Manhattan has borne them out. He was unanimously re-elected associate superintendent after a year's trial in this city. He knows every weak spot in the educational systems of both New York and Brooklyn. Commissioner H. A. Rogers, of Manhattan-Bronx, seconded Mr. Stewart's nomination.

Commissioner Horace E. Dresser, of Brooklyn, nominated Dr. Walter B. Gunnison as a man who would harmonize all the varying elements. He was described as a graduate of St. Lawrence university, a former professor and vice-president of that institution, who has recently declined the honor of its presidency. Commissioner J. H. Thompson, of Brooklyn, seconded Dr. Gunnison's nomination.

Dr. Maxwell, in accepting the position of superintendent of Greater New York schools, said that a heavy responsibility, as well as a high honor, had been placed upon him. He asked the sympathy and co-operation of the borough superintendents, borough school boards, principals, and teachers of Greater New York in the work he is about to undertake.

MEETING OF TRUSTEES OF THE CITY COLLEGE.

Immediately preceding the board of education meeting the trustees of the City college met. Trustee Dresser moved that the remaining portion of the block bounded by Amsterdam and Convent avenues and 139th and 140 streets, not now in possession of the City college, be acquired by condemnation proceedings. This is that part which was previously rejected by the school board of Manhattan-Bronx, acting as trustees for the college. The matter was laid over for one week.

NORMAL COLLEGE TRUSTEES MEET.

At the meeting of the trustees of the Normal college, immediately following, it was moved and carried that junior teachers in the training department receive an increase of $25 per annum in salary, beginning Jan. 1, 1898. Isabel Flood was promoted to a salary of $1,500, beginning April 1, 1898.

TEACHERS' FEBRUARY SALARIES.

The board of education, appropriated, in accordance with the suggestions of Comptroller Coler, money for teachers' salaries for the month of February, independently of other moneys required by the board for the month. By this means it is hoped that there will be little delay in paying any of the February salaries.

President Draper's Final Answer.

Champaign, Ill.—Pres. Draper's final answer to the offer of the New York superintendency was as had been expected. But the widespread desire for his acceptance was voiced by the hundreds of telegrams to that effect, from such men as Ex-Governors Cornell and Morton, and Ex-Mayors Strong and Hewitt, of New York; Gen. Benjamin F. Tracy, Bishop Potter, and Pres. Seth Low. Arguments urged by these men were, that the board could find no man so well fitted for the situation, and that he owed such a service to his native state and the educational interests of the nation. Letters and telegrams continued to come until Friday evening, when Pres. Chas. Bulkley Hubbell and Commissioner John M. Agar arrived from New York, bringing the formal offer of the board of education, and prepared to urge its acceptance. After the conference with these men, Pres. Draper gave out the following statement:

"My purpose to remain with the university has not been shaken. This state university is the head of the Illinois school system. Its work is of the highest public concern. There is as much call for good educational work in this state as elsewhere. In view of this, and other considerations, I owe much to the interests which center here, if it is in my power to serve those interests. I know I am indebted to New York, but there are some other people who are indebted in the same way, and possibly they can pay better than I can. I do not want to remain here until people want me to go. But with all the forbearance and all the support which has been given me, I am content to risk it a little longer. I shall doubtless be content to chance it for some time if the people of this community and state, and the authorities of the university can work together under my leadership harmoniously for the building up of the greatest state university in the country.

"The next particular step which needs to be taken in that direction is more pavements in the city of Champaign leading to the university. If the city will put them down this summer, I am sure that all will be well. Believing that it would, I allowed the New York committee to carry back to their board another, and, I hope, a conclusive, declination of the great honor which its action certainly brought to me."

New York Teachers' Association.

The New York City Teachers' Association, representing the boroughs of Manhattan-Bronx, voted at its meeting, Tuesday afternoon, to employ counsel to look after the interests of the teachers before the legislature at Albany. An appropriation of $750 was set apart for that purpose. It was further reported that the bill setting aside five per cent. of the local excise moneys as a pension fund for teachers, is in the governor's hands, and that it will be signed by him.

The committee on teachers' interests reported that the borough school board had refused to excuse the lateness of teachers, caused by the intense fog on the morning of Feb. 9. It was voted to ask the board to modify the new salary schedule so that teachers of ability and long service in grammar grades may receive as much salary as teachers recently appointed to teach in primary grades.

Proposed Changes in New York Schools.

Several important and progressive changes are being talked of for the schools. One is the reduction of the number of lesson periods to make room for a study period of thirty minutes daily. This will relieve the constant rush from one class to another, and the consequent mental strain on the pupils. Another change is the reduction of the four hours a week which is given to manual training. This, it is claimed, is necessary, to economize the time given for class-room work. Still another proposed change is a reduction of the size of the classes, with sixty as the maximum in the grammar grades, and fifty in the lower grades. This will give a teacher a little more chance to devote attention to the individual pupil.

Free Art Instruction for New York Teachers.

An interesting series of voluntary Saturday morning art classes is being conducted by Dr. James P. Haney, in public school No. 77, First avenue and Eighty-sixth street. About 100 public school teachers were in attendance last Saturday. The classes begin at 9.30 A. M., and close at 11 o'clock. Instruction is given in modeling, brush and color work, designing and free-hand drawing with special reference to the primary grades of the new course of study. There is no charge and attendance of teachers is purely voluntary. There will be three more lessons for primary instruction, after which Dr. Haney hopes to arrange a course for the grammar grade teachers.

Payments for February.

Comptroller Coler has made a concession to Hugh Kelly, chairman of the finance committee of the board of education, in regard to the payment of teachers' salaries for February. Mr. Kelly advised the comptroller that much delay would result if the teachers were not paid until the committee had submitted its estimate for the entire budget of the department of education. This estimate is delayed by conditions existing in the boroughs of Richmond and Queens. Mr. Kelly asked if the salaries could not be paid upon presentation of those particular items of expenditure. Mr. Coler replied that while such action was contrary to custom, he was confident that the board of estimate would sanction it, and that the salaries would be paid at once. As soon as the entire estimate is in, and the appropriation made, further delay will be unnecessary.

Queens Teachers to Be Paid.

The Queens board of education has announced that all the borough teachers will be paid this week. For some months deputies from the comptroller's office have been working to get a full statement of the bonded and floating debt of all the school districts in the borough. In some districts, no contracts with the teachers can be found. The reports of school meetings have had to be studied, in many instances, to find records of expenditure. Everything but teachers' salaries will be held back until this investigation is completed.

Manual Training Conferences.

Supt. Jasper has issued a bulletin of manual training conferences for the teachers of Manhattan and Bronx. Two meetings for each school grade will be held by the special teachers of manual training during the term ending July 1. At these meetings suggestions will be given regarding the teaching of the various special subjects, and the schedule or week's order for the ensuing month will be explained in detail. To unify the work, and help its supervision, the schools of the different manual training districts have been arranged in groups, and the number of conference centers reduced, as far as possible. The meetings will be conducted for the present by one of the special teachers for a double group. All meetings will begin promptly at 4 P. M., and will last one hour. Principals are notified to dismiss their teachers sufficiently early to enable them to reach the places of meeting not later than the hour set for the conference. Each teacher is requested to come to the meeting provided with several sheets of drawing paper, a pencil, note-book, and the Manual of the Course of Study on Manual Training.

Playgrounds on School Roofs.

The roof playgrounds on six of the public schools will be open to children during the summer vacation, every day but Sunday. The schools are Grammar School No. 1, Oliver and Henry streets; Grammar School No. 12, East Broadway and Gouverneur street; Grammar School No. 20, Rivington street, between Forsyth and Eldridge street; Grammar School No. 40, Nineteenth and Twentieth streets and First and Second avenues; Grammar School No. 42, Hester street, between Orchard and Ludlow streets; Grammar School No. 160, Rivington and Suffolk streets.

Elevators have been built in all these buildings, that the mothers and children may be saved the fatigue of stair climbing. The playgrounds will probably be opened as soon as the weather permits.

Mr. McCabe Promoted.

Prin. James J. McCabe, of P. S. No. 24, Brooklyn, has been transferred to No. 23, Conselyea and Humboldt streets, in place of Prin. W. L. Fitzgibbons, whose death was noted in *The School Journal* last week. Miss Augusta D. Moore, head of department in No. 24, will succeed Prin. McCabe.

Teachers' Salaries.

Albany, N. Y.—A bill has been introduced in the senate amending the charter of New York by increasing the salaries of school teachers. The bill provides that each school board shall have power to fix the salaries of all teachers in its borough, and that the salaries need not be uniform throughout the various boroughs. No regular teacher in Manhattan, Bronx, and Brooklyn shall receive less than $600 a year, nor shall any teacher after ten years of service, receive less than $800, nor after fifteen years less than $1,200; no vice-principal, head of department, or first assistant shall receive less than $1,400. No male teacher, after twelve years service, shall receive less than $2,160, and the salaries of male principals shall be increased by $250 each year until they receive $3,500. The salaries of women principals shall be increased by $250 a year until they reach $2,500, and no woman principal of ten years service shall receive less than $2,500.

Brooklyn School Matters.

The Citizens' Association of Bay Ridge and Fort Hamilton has petitioned the borough board for better facilities in school buildings. Many children outside the district are attending the schools of the district, thus crowding out the children who belong there. Many children can attend only one session, owing to lack of room. The petition was referred to the committee on buildings.

It has been practically settled that a new high school will be built in the eastern district, at Ewen street, Metropolitan avenue, and Conselyea street.

President Swanstrom, of the borough board, has been authorized to ask the comptroller for the issuing of bonds to the amount of $1,000,000 for school buildings and furnishings. The laws of 1897, chapter 532, provide that the school board of Brooklyn may call for bonds to the amount of $2,500,000.

Brooklyn Committees.

Pres. Swanstrom, of the Brooklyn borough board of education has announced as the two leading committees:

Finance—Maxwell, chairman; McNamee, Robertson, Nostrand, Williams, Chadwick, and Piper.

Teachers—Weir, chairman; Thompson, Young, Dresser Scottron, Kiendl and Miss Perry.

The chairmen of other committees are;

Music, Williams; drawing and manual training, Cuyler physical culture, Shaddie; kindergartens, Babbott; Girls' high school, Gates; Boys' high school, Cuyler; training school, Maxwell; Manual Training school, McNamee; Erasmus Hall high school, Young; buildings, McNamee; supplies McLean; studies, Hooper; school books, Dresser; sites, Fisher; health, Harrigan; attendance, Chadwick; law and credentials, Bamberger; rules and regulations, Kiendl; retirement of teachers, Higgins; evening schools, Thompson.

The Case of Superintendent Demarest.

Peculiar complications have arisen in Long Island City over the case of Peter E. Demarest, who was appointed superintendent by former Mayor Gleason for a term which expires in June, 1899. The charter provides for only two assistant superintendents in Queens. These have already been elected by the board of education. But the charter also provides that any superintendent holding office at the time of consolidation, should serve out his term. So there is one superintendent too many in the borough of Queens, and it is probable that their duties will conflict. A satisfactory solution of the affair has not yet appeared.

Death of a Veteran Principal.

Jacob Sand, former principal of public school No. 2, borough of Brooklyn, died March 8, at his home. He was born in 1821, and after graduating in theology, decided to become a teacher. In 1852 he was appointed principal of No. 2, and served in that capacity continuously for forty-five years, retiring last October.

Meetings in Manhattan.

March 19.—New York Suburban Educational Council, New York university, Washington Square, 11 A. M.

March 21.—Primary Teachers' Association, College of the City of New York.

March 21.—Teachers' Mutual Aid Society, City college, 4 P. M.

March 22.—Miss Eldredge on "Nature Study" before the New York Society of Pedagogy, P. S. No. 6, 4 P. M.

March 23.—Dr. James P. Haney on "The Modeler and His Medium," before the New York Society of Pedagogy, P. S. No. 6, 4 P. M.

March 25.—Teachers' Co-operative Building and Loan Association, Bloomingdale hall, East 60th street, 4 P. M.

March 25.—Teachers' Building and Loan Association, Room 1001, Presbyterian building, Fifth avenue and 20th street.

New York Society of Pedagogy.

Miss Eldredge, who is lecturing on "Nature Study" before the New York Society of Pedagogy, will not give her talk on Tuesday, March 29. On that date Mr. H. G. Schneider will read a paper on "Visits of Teachers and Pupils to the Museum of Natural History." Discussion will follow the reading of the paper. All are invited.

Superintendent of Queens.

Dr. E. L. Stevens, of the Jamaica normal school, has been elected superintendent of the borough of Queens at a salary of $5,000, and Prof. J. J. Chickering, of Flushing, first assistant superintendent, at $4,000. Prof. Edward F. Fagan, of Maspeth, is second assistant.

Superintendents in Richmond.

Hubbard R. Yetman has been elected superintendent of the borough of Richmond, at an annual salary of $4,000, with Miss Anna Gordon and George Hogan assistant superintendents, at $3,000 each.

Payments Delayed.

Woodhaven, L. I.—The contractors building the new schoolhouses here have been working since December without pay, and are getting somewhat anxious. The work may be stopped if payments are not soon made.

Supt. Demarest, of the Long Island city schools, has retained counsel to sue New York city for the salaries of the teachers. The total amount is over $30,000.

The Richmond teachers have engaged J. C. Ryan, of New Brighton, to bring suit on the city for their salaries. The whole amount due is over $9,000.

Richmond Schools.

The school board of the borough of Richmond has decided to establish a high school, and to introduce a uniform system of study throughout the borough. Hitherto there have been twenty-nine separate school governments, with different text-books and courses of study in nearly every one. Few of the graduates were prepared to enter a normal school or academy. The board has also made a rule, with the consent of State Supt. Skinner, that all teachers on Staten Island shall pass an examination in the county.

East New York School Facilities.

The residents of the Twenty-sixth ward are petitioning the board of education for a new school-house. The present one in the northest section, is entirely inadequate, and children have to travel long distances to other schools. The population of the section has greatly increased in the last few years, but the school facilities have remained practically the same.

Contractor Bussman Assigns.

Jamaica, L. I—B. J. Bussman, who built the Jamaica state normal school, and who has been building the Richmond Hill high school, has assigned. The foundation of the latter school is already laid, and the iron work and 100,000 brick are on the ground. The Fidelity and Deposit Company of Maryland, is Mr. Bussman's surety, and will see that work is resumed on the building. The contract price was $69,725. It is thought by many that Mr. Bussman's bids were too low. His bid on the Jamaica normal school was $96,000, and the next lowest bid was $120,000.

N. E. A.

PROGRAM OF CHILD-STUDY SECTION.

WASHINGTON, JULY 11–12, 1898.

President, Professor M. V. O'Shea, University of Wisconsin.
Vice-president, Miss Sarah A. Stewart, Milwaukee.
Secretary, Professor G. W. A. Luckey, University of Nebraska.

MONDAY, JULY 11, 3 P. M.

1. The Influence of the Weather upon the Activities of Children, Prof. Edwin G. Dexter, normal school, Greeley, Colo.
2. The Rearing of Children from an Experimental Standpoint, Elmer Gates, Laboratory of Psychology and Psychurgy, Chevy Chase, Md.
3. Some Lines of Progress in Child-Study during the Year, President G. Stanley Hall, Clark university.
4. Recent Investigations of Fatigue in Children, Professor Edward W. Scripture, Yale university.
5. Heredity and Environment,—A Study in Adolescence, Professor Edgar James Swift, normal school, Stevens Point, Wis.

TUESDAY, JULY 12, 3 P. M.

1. The Reading of Children in the Adolescent Period, Professor C. H. Thurber, University of Chicago.
2. The Work of the High School in the Light of Recent Studies upon Adolescence, Dr. Albert Leonard, Syracuse university.
3. A Year's Study of the Entering Pupils of the Springfield, Mass., High School, Principal Fred W. Atkinson, high school, Springfield, Mass.
4. Some Cautions to be Observed in Child-Study, Mr. Ossian H. Lang, New York city.
5. The Development of Social Consciousness in Children, Professor Will S. Monroe, normal school, Westfield, Mass.
6. Child-Study in the Training of Teachers, Principal John G. Thompson, normal school, Fitchburg, Mass.

Philadelphia Notes.

Progress in Philadelphia.

Supt. Brooks writes from Philadelphia: "The separation of our normal school from the girls' high school, and the re-organization of both is a work that is telling on the educational condition of the city. We are now erecting one of the largest and handsomest high school buildings in the United States, and hope to extend the course to six years, and establish a commercial school and a four-years' course. A three-years' commercial course, established in the girls' high school four years ago, has been a splendid success. Our school of pedagogy connected with the boys' high school, with a two-years' course to graduates of that school, is giving us a scholarly body of young men teachers. Beyond all this there is a spirit of progress developed among our teachers that has put a new life into our school work, and gives great promise for the educational future."

Philadelphia Girls' Normal School.

The Girls' normal school of Philadelphia is said to be one of the finest school buildings in the world. The building is four stories high, and contains a magnificent assembly room capable of seating nearly 1,400 persons; a handsome chapel or lecture room that will seat over 450 persons; a large gymnasium; two physical, two chemical, and a natural history laboratory; a large library room, fitted up in the most approved style. There are eighteen class-rooms for normal students, sixteen class-rooms for model school, and five kindergartens, a lunch room in the basement for students, and another in one of the upper stories for teachers. On each floor are teachers' dressing-rooms, and the general accommodations for students are complete and convenient. In the basement, which is high and well lighted, there is a large room fitted up as a manual shop; also one for a modeling room for the school observation, and another for a play-room for pupils of the model school.

A large steam and electric light plant with ventilating apparatus, is placed in the basement. This consists of four boilers of seventy-five-horse power each, two large Corliss engines running two 500 light Thomson-Houston dynamos, and one slide-valve engine operating two ventilating fans. The cold air is forced by these fans through large concrete ducts to various class-rooms in the building; while in the winter the air is warmed by passing it over coils of steam piping, thus making it possible always to have fresh air passing to the class-rooms at the rate of twenty-five cubic feet per individual every minute, the temperature being regulated by the thermostats in the rooms or corridors. These latter are electrically connected with the compressed-air tubes which control automatically the valves in the steam system, so that the whole building is heated at a uniform temperature. By means of the electric-light plant, with its total capacity of 1,100 lights, the building is brilliantly illuminated for evening exercises.

The first floor of the building is covered with marble mosaic and all the other floors with selected maple. The principal's office and the library are floored with parquetry of neat design. The walls of the building have been painted in quiet yet rich tones and their beauty is in itself an education to the students. The lower part of the walls are wainscoted with tiles of various patterns, producing a pleasing and beautiful effect in class-rooms and corridors. The furniture of the building is simple yet admirably adapted to the work for which it was designed. The entire building is a gem of architecture, and commands general admiration. Indeed, for its symmetry of proportion, the completeness of its arrangements, and the elegance of its finish, it is unsurpassed by any normal school building in this country or in the world.

Philadelphia Evening Schools.

The report of the committee on night schools states that it is impracticable to arrange pupils according to qualifications, because that would bring grown men and women side by side with boys and girls. But classifying them by ages does not seem to present a much better situation.

One of this term's new features was a school for designing, drawing, and wood carving in the Industrial Art school. Special attention has been given to pupils of foreign birth, and the advance of these has been astonishing.

The sewing-schools have been very popular, 4,171 woman and girls having enrolled.

An evening cooking school was also opened with sixty-five pupils.

The term lasted sixteen weeks, and there were 84 schools. The enrollment was 24,342, 62 per cent. males and 38 per cent. females. At the end of the year there were 13,534 pupils, and the average attendance was 10,235.

Under fifteen years of age there were 6,116 pupils; between fifteen and twenty-one, 12,668; between twenty-one and thirty, 4,118; between thirty and forty, 1,084; between forty and fifty, 291; over fifty years, 65. The average age was nineteen.

Of the enrolled pupils, 15,870 were born in Philadelphia, and 5,121 in foreign countries; 1,084 were colored. The cost of the schools was $58,966.73.

Chicago News Letter.

Circulars have been sent to the teachers, asking them to take stock in a farm to be used for a resting place during vacations. Stockholders are limited to 250, and no person can own more than one share, which will cost $100—$5 down, and $5 a month until paid. Each stockholder is to be entitled to from three to six weeks' vacation, free of charge.

Everything to make the place a desirable summer resort will be done. One would suppose most teachers would jump at such an opportunity; they do jump, but in the other direction. "Spend my vacation with a lot of teachers? No, thank you!" seems to be the popular sentiment. If a little time was taken for consideration, those teachers who are so much afraid of the society of their co-workers would realize that it is impossible to get away from them. In the first place, two or three of them usually travel together, and no place in this whole America is free from them during the summer months. London and Paris are full of them, and, Baedeker in hand, they are easily recognized. And they are usually very good company, as disinclined to talk shop, as you are, whoever you may be. But somehow they seem to have gotten a bad name for themselves, collectively, but, individually, nearly every one is charming.

I know Mr Watt will succeed in his plan, because he always succeeds; and because it is a good thing, and should be pushed along.

The Institute of Education gave an entertainment Saturday, Feb. 19; and although the Chicago weather man did his level best to make it a failure, he was unsuccessful.

Central Music hall was crowded, and everything was so well managed that there was not a hitch in the whole performance.

One teacher came on with her class of first graders and gave directions as quickly as possible to sit, stand, fan, wave flag, etc., and there was not one failure to respond. She called upon some child to put on a cap. The other children were then called upon to describe the action, each using a different form of expression: "I saw John put on the cap." "John took up the cap and put it on." The teacher had frequently to be reminded to speak louder, but there was no difficulty about the children's being heard.

Then an ear test was given. The teacher struck gongs having different sounds, and told them the number of the one she struck. She then struck them again, and called upon a child to tell which she had struck, and in nearly every case it was correctly given—4, 1, 1, 3, 2. The children had their backs turned during the striking. Then she asked a child to strike what she had struck, and that was done correctly. The difficulty of the test can only be appreciated by those who have tried it.

The teacher wrote sentences upon the board. One sentence was, "Quel age avez vous?" The children looked at it while she was writing, and perhaps a second more was allowed; she erased, and they ran to their places at the blackboard and wrote. I do not think there was one failure.

On each little chair a paper with a list of sentences had been written. The children now took the slips, and as the teacher called a name, the child ran forward and performed, in pantomime, the action indicated by the sentence. Some of the actions were: "Play you are a fairy." "Draw three squares." "Climb a pole." And it was very amusing to see the graceful little gestures. The children seemed to be perfectly unconscious of the audience.

An exercise in touch was given. The hands were placed behind the back, and a little boy put something in each one. At the signal, each one told what he had, and held it up for us to see. "I have a peanut," "I have a lemon," etc. Then the blocks were placed in their hands, and they found the ratio by touch. The rapidity with which they did this was astonishing.

A story was read, to which they listened intently. A little boy ran to the front of the platform, and in short, staccato sentences reproduced the story, which was entirely new to them, and never missed a point.

Each child was given a book and told to read a story. Then the story was reproduced. After that, a ladder was brought, and it was walked up and slid down and made the object of any number of exercises.

Ear exercises for enunciation were given—"Thrust the thistle through his thumb" style—and they were correctly repeated nearly every time.

A tug-of-war came, and after the boys had pulled the rope against the girls, the boys challenged Mr. Speer to pull against them. He did so, and while they did not succeed in pulling him through the door, it was all he could do to keep back; and one time he measured his length on the floor, thus proving his own theory, that games put teacher and pupil on the same plane.

A snowball song was sung, with such effect that we could imagine the snow was flying through the air. I am sure the children believed it, from the way they shielded their eyes and ducked their heads and scraped it up.

Then came an exercise in numbers. The teacher placed on the board $\frac{3}{5}\frac{4}{0}$, and before she could erase it, they were ready with the answer. She then placed $\frac{2}{8}\frac{2}{4}\frac{4}{1}$, and they were ready just as soon. Then she repeated two numbers of these figures, each to be added, and it was done instantly.

Mr. Speer said he hoped the time was coming when there would be no reading in first grade, believing that food and physical exercises are what the children need, and out of these the intellectual would be developed.

Mary E. FitzGerald.

Professor Edmund James.

Prof. James, of the University of Chicago, has just been nominated by the bureau of education, Dr. Wm. T. Harris, commissioner, to represent the United States government as delegate to the International Congress of Commercial Instruction, at Antwerp, to be held April 16.

Prof. James has become widely known in connection with the movement for the foundation of schools of commerce and industry in connection with colleges and universities, which has resulted recently in the founding of the new college of commerce in the University of Chicago, and of a similar department in the University of California. For some years Prof. James was at the head of the Wharton School of Finance and Economy, University of Pennsylvania, which was the first department of this kind organized in the United States. He was sent by the American Bankers' Association, in 1892, upon a tour of inspection of the commercial schools of Europe. His report was published by that association in several successive editions, and has been recently re-printed by the bureau of education and the University of Chicago.

Prof. James is president of the American Academy of Political and Social Science, the largest scientific association in the world devoted to the general field of economics and political, economic, and political subjects. He stands at the head of the university extension work of the University of Chicago, having recently been called from a similar position in the University of Pennsylvania.

Victory for Chicago Teachers.

After months of agitation in the cause of proper remuneration for labors, the Chicago grade teachers have won a victory, and their salaries are to be raised. The teachers asked for a gradual increase of salaries until a maximum of $1,000 should be reached in the tenth year of service. Some members of the board contended that by 1900, this would involve a deficit to the city of a million dollars. To obviate this, it was proposed to change the law regarding the 5 per cent. tax limit, so that 2½ per cent. could be spent for educational purposes and 2½ per cent. for buildings and grounds. This was transferring ½ per cent. from the buildings' appropriation to educational purposes, which, in this case, meant salaries. The teachers succeeded with the legislature, and now the board of education has practically granted their petition. Every grammar and primary-grade teacher will receive $75 per month for 1898, and $50 per year thereafter until a maximum of $1,000 is reached. This will cost the board about $350,000, before the new tax law will go into effect. But the teachers are pleased, and the people are glad to see justice done.

Home Study Circle.

The Chicago "Record's" Home Study Circle has just completed the first year of its history. The Circle was started in an unpretentious way to give elementary night school instruction, but has so developed in power and influence that now it claims the largest constituency of any school in the world. The instruction is free, and every student comes into direct personal correspondence with the instructors. Prof. Seymour Eaton, of the Drexel institute, Philadelphia, is the director of the circle, and is assisted by Edward Everett Hale, Boston; John Ebenezer Bryant, Philadelphia; Brander Matthews, Columbia university; Nathaniel S. Shaler, dean of Lawrence scientific school, Harvard; John F. Genung, Amherst's distinguished rhetorician; Pres. Cyrus Northrop, of the University of Minnesota; Pres. David Starr Jordan, of Leland Stanford: Albert S. Cook, of Yale, and Edmund J. James, of the University of Chicago.

The courses for the spring term, which began Feb. 1, and will continue until June 1, are in commerce and finance, commercial law, civics, parliamentary practice, elementary electricity, English history, and literature and literary criticism.

A New Home of Education.

The University of California has invited the architects of the world into a competition for the plan of the new university buildings. The site covers 245 acres, and has been called "the most beautiful sight on earth for the purposes of a university." The idea is to have a harmonious plan for twenty-eight buildings, which shall be an ideal Home of Education. The successful architect will immortalize his name. Mrs. Phoebe A. Hearst furnishes the money for the competition, and the trustees of the plan are J. B. Reinstein, of the board of regents, Gov. Budd, and William Carey Jones, of the faculty.

Trouble in St. Louis.

St. Louis, Mo.—For over a month Supt. Soldan has been subjected to all sorts of attacks, by newspapers, teachers, and people. The most general charge seems to be autocracy—it is claimed that Supt. Soldan has constituted himself a czar, and oppressed the teachers by making them work overtime, holding over them the lash of dismissal, and in various other ways. It is claimed that the superintendent has about him a body guard, which it is almost impossible to penetrate. Among the teachers there seems to be more of a general dislike than any specific charge. One teacher writes that "He has certainly succeeded beautifully in intimidating the mass of teachers, for they are afraid to breathe, lest it be not to his liking," and she confesses that she is afraid to sign her name to the letter.

Some claim that Mr. Soldan's theories of teaching are "crude and dangerous," and are "the effete theories of a German monarchy." One says that "he is, by subtle devices, paralyzing the entire school system." Some say that he has appointed outsiders as supervisors, when there were others under his supervision perfectly competent. One accusation is that Mr. Soldan gave to certain stores a list of dismissed teachers, and credit was refused them soon after.

Mr. Soldan denies the charges of tyranny, injustice, and overwork. He claims that the charges of arbitrariness arise from the fact that two teachers who had to stay away from school because of a contagious disease in their family, did not receive full pay for the time they were away. He claims that he had no authority to give them full pay.

Regarding the whole controversy, a school principal of St. Louis writes to *The School Journal:*

"The truth is Mr. Soldan has injected an amount of activity into these schools, has aroused a spirit of inquiry into the soundness of our methods, a desire to find out what is best, such as they have not known for many years. There are people who don't like this; who look on it as a condemnation of our local traditions.

Perhaps the greatest factor in creating any restlessness that exists, arises from the recent change in the law, under which the St. Louis schools are organized. Under this law the heads of departments are clothed with a degree of executive responsibility far beyond what has hitherto been theirs, while that of the members of the school board has been correspondingly reduced. Naturally some members of the board who went into the office, feeling that their position would give them powers analogous to those formerly exercised there, were disappointed at realizing that their duties are almost entirely legislative. Under the old organization there were principals and teachers, who by reason of relations with members of the board, felt they possessed an influence which made them independent, to a degree, of the superintendent. It is quite natural that such people should feel a profound distrust as to Mr. Soldan having 'sufficient strength of character to withstand the temptations associated with autocratic (?) powers.' Meanwhile the object of their distrust goes on demonstrating his fitness for the trust reposed in him."

Charges Against Supt. Greenwood.

Supt. Greenwood, of Kansas City, Mo., has become the object of a petition for damages by Prin. G. L. Harvey, of the Switzer school. Jointly, with Mr. Greenwood, Prin. F. D. Thorp, of the Lathrop school, and J. H. Brady, chief engineer of the board of education, are attacked. Prin. Harvey claims that his character has been defamed by these men, by charges that he has opened letters not addressed to himself. In consequence, he has filed in the circuit court a petition for a $50,000 damage suit. The beginning of the trouble dates back to about two years ago, when an effort was made to have a certain principal appointed as assistant to the superintendent. Upon Mr. Greenwood's refusal to be a party to the scheme, the attacks on him began.

In his petition for a suit, Mr. Harvey also charges Supt. Greenwood with dominating and controlling the board, and with having absolute authority over the schools.

The school board has constantly supported Supt. Greenwood in his ideas and contentions. An unfortunate incident has been taken advantage of by the accusers.

Last fall, Supt. Greenwood ordered each of the ward principals to secure the names and addresses of all school children afflicted with mental or physical ailments. Thse names were supposed to go to Prof. Krohn, a specialist on insanity. It is alleged, however, that Supt. Greenwood sent the lists to Z. R. Ashbaugh, the agent of a patent medicine company, which at once flooded the parents with advertising circulars. An investigation resulted, and Supt. Greenwood produced a letter from Dr. Krohn, vindicating himself. Prin. Harvey claims that this letter was written after the affair, simply to get Supt. Greenwood out of trouble.

Regarding the whole affair, Prin. John S. Collin, of the St. Louis school system, writes:

"No one who knows Mr. Greenwood as we know him in Missouri, will believe that he has ever, knowingly, lent himself to any scheme or plan, save such as he believed would inure to the benefit of the schools entrusted to him."

37 to 1.

Syracuse, N. Y.—Supt. Blodgett has informed the board of education that the average number of pupils to a teacher in the Syracuse schools is thirty-seven, and advised that this average be kept, if possible. Commissioner Schilly reported that the cost of the truant school was $5,309.82 last year, of which $1,183.20 was expended for food, and $2,802.50 for salaries.

A New Principal for Oneonta.

Oneonta, N. Y.—State Supt. Charles R. Skinner has approved the resolution of the local board of the Oneonta normal school in electing Percy I. Bugbee principal, to succeed Dr. James M. Milne. The action is to take effect at the close of the present school year. This will end what has been, in many respects, a most unpleasant and unfortunate affair.

Dr. James M. Milne has been principal of the Oneonta normal school ever since it was started. For some little time the number of students has been gradually decreasing, and last fall Dr. Milne was asked to resign. A short time after, the request was repeated. On the 25th of February, he was informed that a majority of the board had expressed themselves as favoring the substitution of another principal in his place, and was again urged to resign, in a letter signed by eight members of the board. Upon his refusal to accede with the request, Percy I. Bugbee was elected principal in his place. The matter was referred to the superintendent of public instruction, by whom the appointment of the new principal has been approved.

London University Extension Summer Meeting

The University Extension summer meeting will be held in London from May 30 to June 11, inclusive. Among the lecturers will be Sir John Evans, who will speak on "London Before the Saxons"; Prof. Skeat, on "Chaucer's London," and Mr. Gollancz, on "Shakespeare and the London Theater." Mr. Owen Seaman will give three lectures on "The London Poets"; Mr. Mackinder, two on "The Geography of London," and Mr. Arnold Mitchell, three on "London Architecture," followed by a demonstration in the Church of St. Bartholomew, Smithfield. In the educational section, Sir Joshua Fitch will lecture on "The National Portrait Gallery and Its Educational Uses"; Prof. Miall, on "The Curiosity of Children," and Mr. Marriott, on "John Colet, the Founder of St. Paul's School." Mr. Earl Barnes, former professor of pedagogy in the Leland Stanford Junior university, will deliver three lectures on "Studies on Children."

Private School Supervision.

Boston, Mass.—The educational committee of the legislature has given several hearings on the bill for private school supervision. The bill provides that private school teachers must keep a daily roll, and make returns of attendance to the school committee. Withholding information regarding private schools, is made punishable by a fine of $50.

Charles F. Donnelly, counsel for the Roman Catholic schools, said that the public school representives had no right to interfere with the parochial schools, as the state pays nothing for their support. The attitude of the Catholic schools toward the state was 'hands off."

Relative to placing truant schools under state control, Representative Dubuque said that the bill was an entering wedge for the state control of private schools, and infringed on their rights. It was paternal legislation of the worst kind. It was a sly way of clipping off a piece here and there until the whole private school system was undermined.

George I. Aldrich, of the board of education, denied this, and claimed that the whole purpose of the bill was to bring it about that all children should attend some sort of school, public or private.

Virginia Schools.

State Supt. John E. Massey, in his biennial report, after showing the increase in educational facilities in the last two years, recommends the consolidation of small and sparsely settled districts, longer school terms, a graded course of instruction for country schools, and instruction in manual training. He believes that more effective teaching could be secured by a larger appropriation for the summer normal schools, the organization of the correspondence feature, the formation of teachers' reading circles, and the establishment of a system of county institutes. He claims that much more effective supervision of country schools could be obtained if counties were required to supplement the salary of their superintendent, so that he might devote his whole time to the work.

Supt. Massey also recommends the co-operation of state and town in the formation of school libraries. County high schools should be established, a state board of examiners formed, and Arbor day observed. He also recommends that the act concerning average attendance as affecting teachers' salaries be repealed, and also the law concerning examination of teachers in districts, and that the law prescribing July 31 as the close of the school year be amended to read June 30.

The Kentucky Text-Book Bill.

The text-book sections of the school bill recently introduced in the Kentucky senate provide that sealed bids shall be received by county boards of education from the various text-book publishers in the United States on the prices at which text-books can be furnished. Sample books must be submitted with the bids. The board shall accept the lowest and best bid or bids. Each publisher must make the sworn statement that his price is not more than fifteen per cent. above the cost of production. All dealers in text-books, to whom the accepted books are furnished, shall not sell them at an excess of fifteen per cent. on the wholesaler's price. If local dealers will not comply with this requirement, the board of education is to furnish the books at an advance of five per cent. to cover expenses. Books so adopted are not to be changed inside of five years, unless in case of breach of contract.

New York State Science Teachers' Association

SECOND ANNUAL MEETING, ITHACA, DEC. 30-31, 1897.

(Reported by Franklin W. Barrows, Central High School, Buffalo, N. Y.)

This association was the last of eight scientific societies to enjoy the liberal hospitality of Cornell university during the winter holidays, being preceded on Tuesday and Wednesday by the American Society of Naturalists and its affiliated bodies. The presence in Ithaca of these representative organizations proved a strong attraction to many of the science teachers of the state, and, with the meeting of the association, furnished a four days' feast—such as they have seldom experienced. Indeed, the plan worked so well that the association, through its executive council, has accepted the invitation of Columbia university, to meet next winter in New York, in conjunction with the same societies.

The session was opened Thursday afternoon, Dec. 30, with a short address of welcome by President Schurman, after which the topic of the day, "Physical Laboratory Work in Secondary Schools," was intoduced by Miss Mary E. Dann, of the girls' high school, Brooklyn. She believed that in a term of forty weeks, there should be 150 hours of laboratory work, so planned as to give one-third of all the time to one topic. If only a few hours are available, it is important that a third be given to one topic, because in this way the pupil can best acquire habits of exact observation and description, and the power to draw correct inferences. The work should be principally quantitative; especially where there is ample time. Laboratory classes should be limited to twelve pupils for one teacher. School authorities should not expect great results from a laboratory course in physics until they are ready to give it some such share of time and attention as are now given to language, a branch of mathematics, or to history.

In the discussion, Prof. Bardwell, of Cortland normal school, adverted to the action of an association of principals in a certain section of this state which has recently voted, by a large majority, in favor of mere text-book work in physics! Such action is due either to laziness or to the great odds against which laboratory work has to contend—usually to the latter cause. Small schools with limited resources are frequently just as anxious as the best equipped schools to do good work in physics; and in many such we find that a beginning has already been made, often in spite of discouragement.

Mr. Charles F. Wheelock, of the regents' office, replying to criticisms that had been expressed by some of the speakers, said that he had yet to know of a board of education in this state which had refused a reasonable equipment of apparatus when asked for by a thoroughly competent teacher. Many boards of education have bought expensive apparatus, even when they had teachers incapable of using it. In his opinion, much of the difficulty is not with the board of education, but with the teacher of science. If we can have our schools equipped with thoroughly progressive, active science teachers who can show results, the question of apparatus will solve itself. As to the comparisons that had been made between the schools of New York and of other states, he believed that, while some other states have a few magnificently equipped schools, better than New York can boast, there is no other state in the Union, or in any other equal extent of territory in the world, where there can be found so many schools equipped for doing very good work, and located in towns of from 500 inhabitants up.

Profs. Woodhull, of Teachers college, New York, Bishop, of Buffalo normal, Wetmore, of Albany normal college, and Griffis, of New Paltz normal, also discussed the topic.

In the evening, Dr. Nichols, the president, lectured on "The Use of the Lantern in Science Teaching."

(This paper will be presented in *The School Journal* for either April 2 or April 9.)

After the lecture, President Nichols and his wife received the members and friends of the association at their home.

Friday morning, Prof. Cooley, of Vassar college, presented the preliminary report of the Committee of Nine; a report of such importance that it should be read by every teacher of science. The committee have only begun their work, but they offer some very practical ideas on nature study in the elementary schools, and laboratory work in secondary schools. In summing up this most suggestive report, we have space only to epitomize the conclusions of the committee:

1. An immediate effort should be made to formulate the objects, lay out plans, and surmount the difficulties in the way of a continuous course of nature study in elementary schools. 2. The sciences should be taught in secondary schools by a combination of oral instruction, text-book study, and laboratory work; laboratory work should be definitely provided for in the planning of courses, programs, and examinations. 3. Science should be accepted as preparation for college, when the science has been pursued five hours per week for a year by the method outlined above, when the original records of laboratory work are submitted for inspection by the college, and when all tests of the quality of the work are not less severe than those applied in mathematics and Latin.

Prof. Charles L. Bristol, of New York university, commended especially the committee's suggestions, that the nature work be continuous and progressive from the elementary school up through the high school; that all examinations in science subjects should include actual laboratory work, either as required or optional. He called attention to the fact that Pres. Schurman had, in his address of welcome, anticipated the report of the committee by stating his willingness to recognize preparation in science as an entrance subject to college, laying the same stress on the necessity for thorough work as did the committee. He said that the preparation of a series of manuals for science courses, as proposed, should proceed with all the speed possible. No single effort of the association would do more to unify and promote the teaching of science than such a series.

Prin. Lovell, of Niagara Falls, emphasized the importance of continuous study of nature as a preparation for science work in the high school. A child in his school unconsciously expressed one of the greatest truths of pedagogy when she wrote: "I know more about the oak leaf now, because I have made a drawing of it." Even a child's mind can comprehend the logical steps in a well-arranged course of nature study.

Prof. E. W. Wetmore, of the Albany State Normal college, suggested that the regents might stimulate original scientific work by adding to their present quota of examination questions, a few optional questions, to test the laboratory accomplishments of the pupil; also by permitting the pupil to submit his original laboratory note-book as part of the examination. Many teachers, untrained and poorly furnished for science work, would be glad to receive practical suggestions as to what to do first, what next, and how to do it. The plan offered by Prof. Wetmore for the preparation of a "Science Teachers' Manual," was referred, by vote of the association, to the Committee of Nine.

Prof. D. W. Hering, of New York university, hoped that physics would not be required for admission to college in addition to the other studies now required. The advancing of entrance requirements is working inevitably to the shortening of the undergraduate's course in college—a result—of questionable advantage. At Harvard and at Johns Hopkins, the course can be completed in three years, while various other colleges have so arranged their curricula that the fourth year's work may be taken in a professional school, and yet be counted for the bachelor's degree. Under these circumstances, it seems proper for the secondary schools to ask the colleges to accept preparation in physics as an alternative for something else now required for entrance.

At the request of Dr. Stowell, the president called upon Prof. B. G. Wilder, who said that his recent experience referred to by Dr. Stowell consisted in giving thirty half-hour exercises in anatomy and physiology, without books, but illustrated by easily obtained specimens and apparatus, and by simple and painless experiments, to forty boys and girls, seven to eleven years old, in the second grade of a primary school. The work was undertaken for the sake of testing the validity of certain beliefs and methods, some of which were outlined before this association a year ago ("Science," April 2, 1897, p. 537). The results, especially with regard to the brain, were briefly stated in "Science" for Dec. 17, 1897, in an article entitled "The Desirability and the Feasibility of the Acquisition of Some Real and Accurate Knowledge of the Brain by Precollegiate Scholars."*

Upon some future occasion he hopes to discuss in some detail an educational experience which, from every point of view, he regards as the most precious of his life, and which served to remove forever the last lingering doubts as to the advisability and the practicality of making natural science a real, serious, universal, and indispensable requirement for admission to college.

Prof. Charles B. Scott, of the Oswego normal, believed that nature study can be introduced most successfully in our city schools through the efforts of the science teachers in the high schools. He related his own experience in St. Paul, Minn. The work began in April by organizing a volunteer class of about twenty-five teachers, who met weekly for the study of plants; about a dozen of them began this kind of work with their pupils. In the fall sixty or more teachers carried on the study of plants, insects, and minerals, and twenty-five or thirty of them gave instruction to pupils. The second year, several teachers' classes had to be organized under the leadership of principals, and over 200 teachers were giving instruction in nature study of nearly 14,000 pupils—all voluntary. This led to the adoption of a graded course of nature study in all the schools, the teachers meeting regularly to plan their work under the direction of the leader. It was generally agreed that this work had done more toward developing individuality and genuine power in the pupils than all the other school work; while it brought equally rich returns to the teachers, too.

Mr. R. H. Cornish, of the girls' high school, New York city, said that none of the recommendations of the committee were unusual or radical, but all had been put to practical test in other places. The University of Chicago has, from the first, accepted work in science as a substitute for other work required for entrance. Harvard has required physics for the

*The report of the Committee of Nine and the papers by Miss Dann and Prof. Underwood are printed in the current number of the *Journal of Pedagogy*, Syracuse.

*Copies of this will be sent to teachers who may indicate their desire for it.

last twelve years, and is now increasing the number of science subjects that may be offered for admission. The chief difficulty in carrying on laboratory work lies in the lack of competent teachers. The best teachers are those who have had actual practice in laboratory classes. Inexperienced teachers may enjoy the advantages of such training in the summer schools at Cornell, Harvard, and elsewhere.

Prof. Woodhull, in commending the work of the committee, offered a resolution to the effect that every high school should offer a full year's work in physics. A number of amendments were proposed, and the resolution was finally referred to the Committee of Nine.

Prof. L. M. Underwood, of Columbia unviersity, presented the paper of the morning on "The Study of Botany in High Schools." The purpose of the school should be not to develop botanists, but to develop observing, thinking men and women. Botany should have one year in our high schools, preceded by a year of physics. Two two-hour periods should be given to laboratory work each week. Apparatus should be simple and re-agents few; the pupil should learn to use his eyes before using a magnifier. In using the compound microscope, he should learn correct ideas of size and proportions, by means of micrometer scales. Considerable time should be given to plant physiology, and to the lowest forms of plant life. Do not neglect winter botany. Such work requires teachers who are well prepared, by study, for their work; it requires laboratories and time for laboratory work; it demands a more rational examination system than is offered as now by the regents.

Miss Sarah V. Chollar, of Potsdam normal school, opened the discussion. She congratulated the association on bringing together the teachers in colleges and secondary schools for the discussion of educational matters, and especially for the advancement of science study. In most of our high schools the courses in botany are very short; often twenty weeks; and the facilities very meager—often no laboratory, and only one microscope—and yet this work is an improvement over the botany courses of a few years ago. How can we make further progress? First, the teacher must adopt that plan that is best suited to his particular school. In any case, the work should be definitely and clearly outlined for the pupil, so as to prevent waste of time. Undirected work frequently degenerates into mere play. Botany should be presented in a logical form. The different kinds of class work must possess unity. Mental discipline is not, however, the only aim. One studies botany because he wishes to know botany—the life history of the plant and the problems that it involves. If he studies these things carefully and systematically, he also acquires keen perception, an exact vocabulary, acute judgment, patience. His æsthetic sense is cultivated, and he appreciates such authors as Emerson, Thoreau, and Burroughs. He forms a habit of truthfulness and a desire to verify his results.

Prof. W. H. Lennon, of Brockport normal, also advocated two-hour periods for laboratory work. He would give physiology a prominent place in the study of plants.

Prof. Charles W. Dodge, of the University of Rochester, spoke in the highest terms of Prof. Bailey's new botany, "Lessons with Plants," especially for schools which lack a laboratory and a specially trained teacher. The book will undoubtedly do much to raise the standard of science teaching in small schools. It is strictly scientific in method, and the studies are confined to the higher plants, and to common and easily obtained varieties.

Prof. Francis E. Lloyd, of the Teachers college, New York, advised teachers to make use of common garden vegetables as a basis for study. After such study, the onion and the hyacinth are of equal dignity. What is true of material is true of instruments. Those who use the microscope realize most fully how very much can be seen without its use, if the eyes are aided by thoughtful attention.

Mr. Charles N. Cobb, of the regents' office, after complimenting the paper of Dr. Underwood, called attention to his error in supposing that botany is the only subject that suffers by lack of preparation on the part of teachers, and then cited an instance where a man, then principal of a union school, was hired to take charge of an adjoining union school. In this school to which he was going there were in course of instruction classes in first-year Latin, Cæsar, Virgil, and Cicero. He had never studied Latin an hour, but after his engagement he used all the time he could spare to fit himself for teaching these classes in the school to which he was going, and succeeded so well in the six weeks at his disposal that he taught the classes throughout the remainder of the year to the satisfaction of the patrons, and they re-engaged him for another year. He is still doing that work.

Mr. Cobb also mentioned the fact, that in all publications from the regents' office, the regents distinctly urge longer courses and more thorough work on the laboratory plan in such subjects as botany.

The discussion was closed by Prof.. S. H. Gage, of Cornell, who said:

"Two things are necessary for the introduction of real science into any school: good facilities and good teachers.

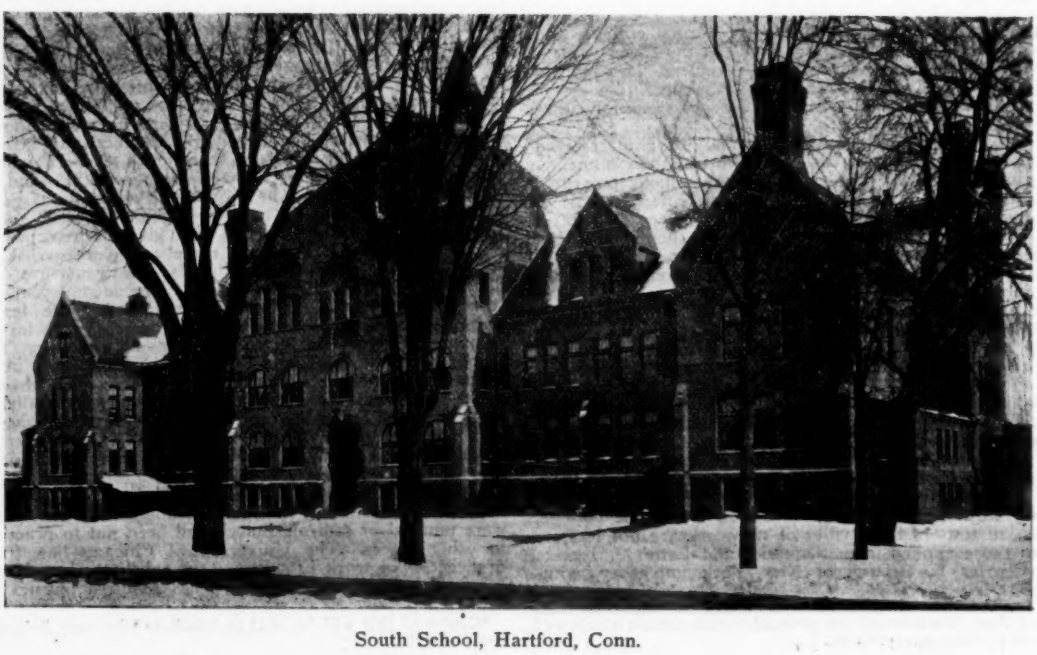
"By good facilities is meant proper apparatus, material, and abundant laboratory space, the laboratory to be well lighted and ventilated.

"Few schools have these facilities, and it was not long ago that few colleges and universities had them. If the schools proceed as did the colleges and universities, and do the very best they possibly can with poor facilities, the good facilities will certainly follow. If no effort is made, and the need not emphasized, why should school boards expend money for buildings and equipment?

"Good teachers are as necessary as good facilities. Shall the schools wait until there are adequately prepared teachers before making a beginning? Inadequacy of preparation and of original capacity among teachers is not confined to science teachers, nor to the schools below the college. Let the teacher do his best, and the effort will inspire him to become adequately prepared, and in his own earnest efforts for self-improvement he will arouse the earnestness and enthusiasm of his pupils. The greatest teachers the world has known have been men who learned with their pupils.

"Do not, then, hesitate to teach science because you do not know it all; neither rest content with teaching the little you do know; but, like every true teacher of science, or any other subject, strive to increase your knowledge, and you may feel assured your pupils will strive with you."

By invitation, Pres. William Orr, Jr., of the Springfield, Mass., high school, spoke in the interests of the American Association for the Advancement of Science, enlisting the interest of science teachers, and especially inviting them to the meeting in Boston, next summer.



South School, Hartford, Conn.

The Tuskegee Conference.

Tuskegee, Alabama.—Unquestionably the most unique educational gathering in America to-day, if not in the world, is the Negro Farmers' Conference, which Booker T. Washington assembles every February at Tuskegee, Alabama.

The Farmers' Conference strives to do what it can to educate the men and women who have not the time to go to school, even if they were not too old. The numbers have swelled, until this year there were quite fifteen hundred farmers and their wives present, while the scope of the conference has widened, to embrace many questions which vitally concern the colored people. Delegates were present this year to report progress from Texas, Louisiana, Mississippi, Tennessee, and Georgia. So famous has the conference become as the best place in the United States to study many of the perplexing problems of negro education, that it draws to Tuskegee each year a large number of teachers, professors, and college presidents from all over the country.

In appearance, nothing more picturesque can be imagined. The sessions have outgrown all the buildings of the institute, and are now held in a rough, temporary structure, hung on the interior with Spanish moss, and flags, caught back with palmetto leaves, to conceal the roughness of the walls. A great many of the farmers and their wives who attend, drive in from the surrounding country, and their teams are hitched to the fences around. A more miscellaneous assortment of mules, horses, and steers it would be hard to find. The people themselves might still, many of them, be in the garb of slave days, so far as style is concerned. Most of the women wear bright dresses and huge, flaring sun-bonnets from beneath the shade of which their eyes shine out. Men and women alike, are intensely in earnest, and they waste no time. They are the speakers, telling their experiences, or perplexities, and asking questions. Booker Washington simply directs the discussions, and keeps them down to the subject in hand. The questions considered are always eminently practical, and all over the Black Belt may be seen the good effect of the suggestions which the people who attend the conferences carry home with them.

The discussions this year centered around the following set of declarations:

1. "Wherever our people have been reached by outside influences, we believe there is constant growth in acquiring education, building school-houses, extending the school term, developing Christian character, improving and purifying the ministry, securing land, diversifying crops, raising fruit and poultry, replacing the one-room cabin, ceasing to mortgage crops, getting out of debt, and living more economically.

2. "Since 85 per cent. of our people, in the Gulf states, live by agriculture, we strongly urge that, along with other forms of education, special stress be laid upon training in agriculture.

3. "We earnestly urge all to buy land, if only in small tracts, while it can be secured at a low price. We would especially call attention to the large amount of government land in the South, open to settlement.

4. "We deem it of vital importance that the educated young men and women bear in mind that they owe it to the race to give to the most unfortunate the benefit of their education in every way possible.

5. "We urge that local negro conferences, or other organizations with the same object, be formed throughout the South. We strongly beseech our people not to be satisfied with their present condition, but to reach forward to something higher and better."

M. B. Thrasher.

Pupil Teachers' Bill.

Trenton, N. J.—A bill has passed the senate relating to the admission of pupil teachers from the normal school into the public schools of the state. The bill empowers the principal of the normal school to send his pupils into any public school for experience. The Trenton board of education is strongly opposed to the bill on the ground that most of the pupil teachers would go into the city's schools, and be a detriment to them. It is suggested that the state maintain its own training school, or else make the model school free, and make its classes a training department for teachers.

Training Class Exercises.

Jersey City, N. J.—The graduating exercises of The Jersey City training school for teachers, classes of June '97 and Jan. '98, were held in the public auditorium of School No. 9, Friday evening, March 11, 1898. There were 26 graduates in the class of June, '97, and 33 in the class of Jan., '98, all having successfully completed the regular high school course of four years, and besides, one year in the special training classes for teachers. These young ladies are now prepared to enter the schools as regular teachers, and their services will be needed as soon as the five new schools, now in course of construction, are finished. Supt. Wm. H. Maxwell, Ph. D., of Brooklyn, delivered the address on "Some Duties and Responsibilities of Teachers." Miss Lena Koster delivered the salutatory, and Miss May Scott the valedictory address.

I. P. T.

"National Day."

Rochester, Minn.—Rev. F. P. Leach, in an address to the eighth grade pupils of this city on the occasion of the celebration of the birthdays of Washington and Lincoln, suggested that a day be set apart between the two birthdays for the celebration of both, and that the day be known as National day.

Items of Live Interest.

An International Congress on commercial education will be held at Antwerp, Belgium, April 14-16. It is designed to give to business men, teachers of commercial subjects, and representatives of central and local educational authorities an opportunity to discuss the curriculum and methods which should be adopted in commercial schools of different grades. The secretary is Mr. Emile Roost, 120 Boulevard Leopold, Antwerp.

Prof. Sully is delivering a course of twelve lectures for teachers on the "Science, Art, and History of Education," at the College of Preceptors, London. The course began on Feb. 17, and the lectures are held Thursday evenings.

Next summer, the schoolyards of Newark will be open for the use of all children throughout the city.

Chicago, Ill.—Prof. Charles R. Barnes, of the University of Wisconsin, has accepted the chair of plant physiology in the University of Chicago. He is one of the foremost botanists in the country, and is the leading authority on mosses.

Lancester, Pa.—Two students of the Millersville State normal school, in the course of a quarrel, drew their revolvers. One student was killed and the other fatally injured.

Boston, Mass.—The committee on supplies, in its report for 1897, states that the net cost to this city for supplies, was $226,081.56—an increase of $13,058 99 over the previous years. The average number of pupils was 81,638, making a cost for each pupil of $2.75.

Plainfield, N. J.—The semi-centennial of the establishment of the public school system in this city, was celebrated in the high school, March 9. Addresses were made by O. B. Leonard and Rev. D. J. Yerkes.

Jersey City, N. J.—A new parochial school building is to be erected at the corner of Ocean and Bramhall avenues, opposite St. Patrick's church. The school will cost about $100,000, and will be built of brick and stone. The work is to be begun in May.

Chadron, Neb.—Robert Parsley, a Spanish student in the Chadron high school, upon making the remark that the destruction of the Maine was a good thing, was furiously attacked by a number of other boys, and severely beaten before he could be rescued.

Boston, Mass.—The bill to make a more equitable distribution of the cost of education by having the state pay one-third of the current expenses, is again before the legislature. Last year the measure was passed, but was vetoed by the governor. At present many of the wealthier cities and towns have finely equipped schools with a tax rate of about two dollars, while the poorer towns have poorly equipped schools at a tax rate of seven or eight dollars. Under the proposed tax, all towns having less than the average property valuation per scholar would gain, while those with more would lose, thus equalizing the burden, and bringing city and town educational facilities closer together.

The report of Commissioner Herbert E. Benton, of Connecticut, to Governor Cooke, shows that the securities constituting the capital of the school fund, amount to $2,007,080.97.

A bill is now before the Maryland senate providing for the establishment of manual training schools in the various counties of the state. The Baltimore Polytechnic institute, which started as a manual training school, has proved invaluable to the city's public schools, and so it is proposed to extend the system throughout the state.

State Supt. J. R. Kirk, of Missouri, speaking of Attorney General Crow's decision adverse to the Bible in the public schools, says that many people in the state believe that the attorney general is wrong, and that the Bible will still be read, accompanied by non-sectarian devotional exercises, in many of the schools of the state.

The lower house of the Iowa legislature has rejected the bill for state uniformity of school books.

Kansas City, Mo.—Prof. George B. Longan, principal of the Humboldt school, has started a printing office in the building, and the students are taught to set type and work the press in connection with their language work.

XUM

The Primary School.

Pussy Willow Day.

By Alice C. Hale, Worcester.

During Saturday's walk along the river bank, Miss M.'s class discovered that the willows had put out their gray, furry buds from the brown coverings, and were swaying lazily to and fro on the budding twigs. Ready hands soon gathered a large bunch, for the children knew that Miss M. had been waiting some days for the willow buds to be brought in.

Just a few days before, she had said: "Children, we ought to have some pussy-willows by this time." So all were on the lookout for them, and felt sure that the day Miss M. set for the pussy-willows would be of more than usual interest and pleasure.

Every Monday morning Miss M. had a pretty drawing of the willow buds in one corner of the blackboard, and on the opposite board was a bunch of twigs, with veritable little pussy-cats climbing up the stems, ears, paws, tails, complete as if the furry little buds had turned into kittens in some mysterious way. Such funny little pussies, too! thoughtful, gay, sleepy, mischievous; just ready to spring from their slender perches on some unsuspecting mouse, and yet enough like pussy-willows to be recognized directly by the bright-eyed class of seven-year-olds, assembled in Miss M.'s sunny rooms.

The pussy-willows from the river bank were in a tall, brown jar on the table, and after the opening exercises, each child was given a branch with several soft buds on it, and a nice sheet of paper, and were told to put on the paper a picture of the twig they each had. Each one was busy at once making a drawing of his particular twig and buds.

After the drawings were completed, Miss M. collected them, that she might select some of the best to be colored at a subsequent lesson, for the children were often allowed to color drawings that showed careful and thoughtful work.

Then the children all told of something they could see or knew about the willow twigs they held, and some of the best statements were written on the blackboard for a reading lesson later in the day. One told of the way the buds grew on the stem; another, of the color and the hard brown coverings of the buds that protected them all the cold winter. And another discovered that these were like the buds of the horse-chestnut tree they had examined a few days before. By looking closely, the children were able to see the faint yellow tinge underneath the gray, furry covering, and discovered they were looking at flower buds.

When the children had finished their talk, Miss M. had a story for them, which she said would be reproduced for a reading lesson, and she told them the story of Pussy-willow's Hood, which she had found in Miss Pratt's "Little Flower Talks."

PUSSY WILLOW'S HOOD.

Pussy-willow had been shut up in her house by the brook all winter, but one morning she opened her door and stepped out and found that spring had come. None of the flowers were up yet; the brook, the birds, the buds, and a few green grass blades were all the friends she saw.

"Why, whom have we here?" asked the brook, in surprise. "Mistress Pussy-willow, as I live! Good-morning, Pussy; you are up bright and early; but why do you wear that fur hood? Summer is coming, and every day the sun gets warmer!"

"Oh," said Pussy-willow, "Mother Nature told me to keep it on, lest I get a toothache."

Everybody was glad to see Pussy. They all had something to say to her, but they were all curious to know why she had on that fur hood.

Poor Pussy! She was tempted to take it off, they all said so much about it; but she didn't.

To make matters worse, Mr. Robin whispered some sly things to Pussy's friends, and the next morning, when Pussy came out, the birds, the buds, the grass, and the brook began to shout, "Baldhead! baldhead! Pussy-willow has to wear a hood because she has no hair! Pussy-willow is a cheat!"

Pussy felt very bad, but all she said was, "Wait and see."

One morning, not long after this, every one had a surprise. There was Pussy-willow with no fur hood on her head, but bright, golden curls dancing in the breeze.

"Pussy is not a baldhead; she has long, golden curls!" cried all her friends, and mischief-making Mr. Robin went and hid his head for shame.

PLEASANT AND HELPFUL LESSONS.

When the story was finished, Miss M. had the language class write what they could remember of it, and the number class had pussy-willow problems and pussy-willow twigs to measure and compare.

Then the geography class had a lesson about the river where the willows grow.

"Pussy-willow day is the nicest day we have had this spring," said Mollie, as she bade her teacher good-night.

Pussy Willow Observations.

What shall be done with the spring deluge of pussy-willows? Ask each child to mark the tree or bush from which his pussy-willows are taken, and to pick from no other tree.

Furnish blocks of manilla paper or note-books, in which to record observations.

Draw, paint, or mount the pussy-willow twigs and leaves at different stages.

Describe the tree or bush, and the locality in which it grows. Note the size of tree. Examine the bark; is it alike in color and texture on trunk, branch, and twig? How do the branches grow? Does the main trunk extend to the top of tree, or is it divided into branches? Do the twigs point up or down? Do the pussy buds open first near the top of tree or near the ground? Why?

What is first seen on pussy-willow twig? Describe the brown bud; where does it begin to open? What protects the bud from the cold? Examine and describe the brown covering or scale. What is the arrangement of buds upon the stem? Why is it called *pussy*-willow? What is the gray pussy? What happens when the pussy grows old? Are all catkins alike? Are they alike on the same tree? Why are some green and some yellow? Examine the yellow catkin. What makes it yellow? Look at a pollen grain under magnifying glass. Note the soft, silky scales, with double heads, and the tiny honey-bag on staminate blossom. Is there any pollen on the green catkin? Find the silken seed-bag and the sticky horns on the pistillate catkin. Explain use. Does the bee pay the willow for the honey he takes from the blossom? When the catkin grows old and gray what becomes of its hair? What does it carry away with its hair? When do the leaves appear on the willow? Are all leaves alike? What is the general shape? What is the color of the top of leaf; on the underside? Are the leaves rough, smooth, or hairy? Are the leaves on the staminate and pistillate trees alike?

What birds like willow trees, and why?

F. M. G.

XUM

Games and Action Songs.

Crocus Bells.

(An action song for Arbor day.)

By Alice E. Allen.

Music: "Lightly Row" in Franklin Square Song Collection No

(1) "Lightly ring; lightly ring;"
Called the welcome voice of spring;
(2) "Up, away! up, away!
Welcome, Arbor day!"
(3) We were sleeping 'neath the snow,
When we heard that dear voice, low,
(4) "Lightly ring; lightly ring;
(5) Welcome, Queen of Spring!"

(6) Clearly ring; clearly ring;
To each heart your message bring,
(7) Soft and clear; soft and clear;—
Arbor day draws near.
(8) Crocus blossoms, brave are we,
(9) Ringing, each one, cheerily,
Clearly ring; clearly ring;
(10) Welcome, Queen of Spring!

(11) Sweetly ring; sweetly ring;
Bluebirds, thrushes, robins, sing,
(12) Sweet and dear; sweet and dear;—
(13) Lo, our queen is here!
(14) See, the light of her blue eyes
Smiles upon us from the skies;
(15) Sweetly ring; sweetly ring;
(16) Welcome, Queen of Spring!

(17) Gladly ring; gladly ring;
Let each tiny blossom swing
To and fro, to and fro,
Every heart aglow.
(18) Dancing at our queen's own ball,
(19) Dancing, courtesying, one and all;
(20) Gladly ring; gladly ring;
(21) Welcome, Queen of Spring!

(22) Sadly ring; sadly ring;
Time is ever on the wing;
(23) Sad and slow; sad and slow;
Our dear queen must go!
(24) Sadly toll each tiny bell,
Till it breathes a fond farewell;
(25) Sadly ring; sadly ring;
(26) Farewell, Queen of Spring!

DIRECTIONS AND MOTIONS.

Each child represents, by color of gown, white, pale-yellow, or pale-lavender, crocus; white stockings and slippers; on each wrist and ankle, tied by narrow ribbon, of same color as gown, is a tiny bell. Inexpensive bells, such as are used in making fancy articles, may be used.

(1) Children kneel in line across front of stage; both arms curved around back of head; look down.
(2) At "Up" throw hand gracefully up; at "Away" throw to each side, palms upward; repeat; drop hands to sides at end of line.
(3) Heads dropped to right side.
(4) Lift right hand gracefully, waving it; look up to right; repeat with left.
(5) Drop (4): rise to feet.
(6) Hold hands, fingers interlaced, high above heads, swaying slowly; look up.
(7) Repeat (4) with free hand under ear, as if listening; music soft.
(8) Step forward on right foot; all clasp hands.
(9) Raise clasped hands high above heads; sway slowly back and forth in time to music, throughout two lines.
(10) Hold position (9) as tableau.
(11) Hold right hand raised; wave left hand just below it, as if pushing bell to and fro; repeat with left hand raised; drop at end of line.
12) Repeat (11.)
(13) Hold right hand as in (11); drop left to side; smile; look up to left.
(14) Drop hand; lift face up; smile.
(15) Repeat (11).
(16) Extend both hands as if in greeting.

The Trees Put on Their New Spring Dress.

(A spring game with recitation.)

Form the children into four rings. One will represent a field for ploughing; in this field there should be a farmer with half a dozen boys to form a plough, and one other boy to sow seeds. In the second field a few children represent cows and lambs. The third ring makes a hen house; one of the bigger children represents the mother hen, the smaller ones the chickens. In the fourth ring every alternate child steps out to represent trees in a wood. Four children go out of the room; they are the birds mentioned in the first verse.

The (1) trees put on their new spring dress,
A lovely emerald green;
The (2) robins and the sparrows come;
The swallow, too, is seen.

The (3) birds begin to build their nests,
And weave them while they sing;
The (4) tiny chicken breaks its shell,
A pretty yellow thing.

The (5) little lambs, with coats so white,
Frisk gaily all the day;
The (6) cows are eating fresh, spring grass,
"Moo, moo," I hear them say.

Come, (7) Mr. Farmer, bring your plough,
And harrow up this field;
Then (8) handfuls of good corn we'll sow;
A harvest it should yield.

(1) Children who take the part of trees wave their arms for branches. (2) The four little birds come flying to the wood. (3) The four little birds pretend to pick up moss and twigs for their nest. (4) The chickens, who have been nestling under their mother's wing, fly about. (5) The little lambs frisk and run about. (6) The cows pretend to eat grass. (7) The plough moves up and down the field. (8) The man sows the seed.

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XUM

Letters.

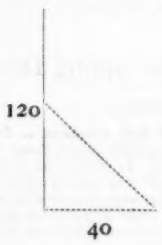
The "Difficult Problem."

Replies and solutions to "the Difficult Problem" given in *The Journal* of February 12 have been received from the following: J. I. Burwell, Bostwick, Neb.; J. Mace Smith, Binghamton, N. Y.; P. H. Underwood, Galveston, Tex.; Elmer C. Westall, Asheville, N. C.; J. K. Ellwood, Pittsburg, Pa.

The problem as stated was, "Where shall a pole 120 feet high be broken so that the top may rest on the ground 40 feet from the base?"

The following are some of the solutions:

Rule.—Divide the difference between the squares of the height of the pole and the base by twice the height of the pole.



$120^2 = 14{,}400$
$40^2 = 1{,}600$
$2 \times 120 = 240) 12{,}800$
$53\frac{1}{3}$ feet.

Respectfully,
J. I. Burwell.

(*a*) Let h and p represent the two parts.
(*b*) The sum of any two numbers × their difference is equal to the difference of their squares.
(*c*) We have *given* in this problem the *sum* of two numbers (120), and the difference of their squares ($40^2 = 1600$).
(*d*) $\therefore 120\,(h-p) = 1600$, or $h-p = 13\frac{1}{3}$.
(*e*) We now have the sum (120) and the difference ($13\frac{1}{3}$).

$\therefore \frac{1}{2}\,(120 + 13\frac{1}{3}) = 66\frac{2}{3}$, the longer part, and
$\frac{1}{2}\,(220 - 13\frac{1}{3}) = 53\frac{1}{3}$, the shorter part.

J. K. Elwood.

In the above problem, the difference between the squares of the hypothenuse and perpendicular is equal to the square of 40, or 1600. In other words, divide the number 120 into two such parts that the difference of their squares may equal 1600. The difference between the squares of any two numbers is equal to the product of their sum by their difference. Now, in this problem the difference between the two squares is 1600, which, if divided by the sum of the two numbers, 120, will equal the difference between the hypothenuse and perpendicular. $1600 \div 120 = 13\frac{1}{3}$. Now, it is easy to determine the hypothenuse and perpendicular: $120 + 13\frac{1}{3} = 133\frac{1}{3} \div 2 = 66\frac{2}{3}$, the hypothenuse; $120 - 13\frac{1}{3} = 106\frac{2}{3} \div 2 = 53\frac{1}{3}$, the perpendicular.

Elmer C. Westall.

Under the title of "A Difficult Problem," Mr. Craig gives an example, which he states is from Adams' Arithmetic, although it is not. There is a similar one in Adams', also in Davies' "University."

The example is based on the carpenter's square, which was once made of wood, the longer part being four feet long and the arm three feet long. If these extremes be connected it forms a right-angled triangle whose sides are represented by 3, 4, and 5; 3 being the base, 4 the perpendicular, and 5 the hypothenuse. The sum of the numbers representing the perpendicular and hypothenuse equal 9. The perpendicular equals $\frac{4}{9}$ of the length of the pole. It may be stated by proportion: $9 : 120 :: 4 : x$.

I believe I am right when I state that neither this nor any similar example has ever been published by a mathematician except in connection with an illustration of the proposition that the square described on the hypothenuse of any right-angled triangle is equivalent to the sum of the squares described on the other two sides, in which the sides were given as 3, 4, and 5.

J. Mace Smith.

The greater includes the less. Hood's Sarsaprilla cures scrofula, and may be depended upon to cure boils and pimples.

THE SCHOOL JOURNAL

(Established 1870.) published weekly at $2.50 per year, is a journal of education for school boards, superintendents, principals, and all teachers who desire to have a complete account of all the great movements in education. We publish THE TEACHERS' INSTITUTE, monthly, $1 per year; THE PRIMARY SCHOOL, monthly, $1 per year; EDUCATIONAL FOUNDATIONS, monthly, $1 per year, and OUR TIMES (Current Events), monthly, 30 cents per year.

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Books.

Schools, homes, and Bands of Mercy, are furnished with a book suitable to their needs in "Songs of Happy Life," compiled by Sarah J. Eddy. This book has been examined and approved by Emory P. Russell, director of music in the public schools of Providence, R. I., and Prof. H. A. Clarke, of the University of Pennsylvania. Poems have been written especially for it by Mary E. Wilkins, Jane Campbell, Sarah C. Padelford, Wm. W. Caldwell, and Wm. J. Long, and original music by a number of well-known composers. A number of poems by Mrs. Celia Thaxter, Miss Edith M. Thomas, Miss Emma Poulsson, and others have, for the first time, been set to music. Many songs from the best recent song books have also been included. A number of songs will be found suitable for Bird day, Arbor day, Memorial day, Washington's birthday, and similar occasions. (Art and Nature Publishing Co., Providence, R. I. 30 cents.)

There have been many books written about Japan, all reflecting more or less truthfully the life, industries, and government of this wonderful people. Under an appearance of frankness, however, the Japanese hide an impenetrable reserve in regard to certain social phases of their country. Alice Mabel Bacon found that the only way to get at the inmost secrets of their social life was to live in Japanese homes; this she has done, and she has embodied the result of her investigation in the delightful little book on "Japanese Girls and Women." She tells about their childhood, education, marriage and divorce, court life, peasants, life in cities, etc. The book belongs to the Riverside Library for Young People. (Houghton, Mifflin & Co., Boston. 75 cents.)

A fine French classic, "La Mare au Diable," by George Sand," has been edited for the use of students in the first or second year in French, with introduction and notes, by Prof. Edward S. Joynes, of South Carolina college. The introduction, besides giving the important facts of the author's life, aims to inspire the student with some degree of literary interest and sympathy. (Henry Holt & Co., New York. 40 cents.)

Jules Magnenat, of the state university of Texas, is the author of a "French Practical Course," the fruit of his long experience in teaching the language. The whole book (rules, directions, etc., as well as the lessons) is in French, and is thorough and practical. (The Macmillan Co., New York. $1.00.)

There is a general interest in bacteria, and their relation to disease. Those who wish to be informed on that subject, but have not the time to investigate the subject minutely, will find all the information they need in "The Story of Germ Life," by H. W. Conn. It is one of the little volumes of the Library of Useful Stories. The book corrects many errors regarding these organisms. There are many diagrams and other illustrations. (D. Appleton & Co., New York.)

An especially desirable edition of "The Princess," by Alfred Tennyson, is that edited by Prof. Albert S. Cook, of Yale university. Prof. Cook has aimed to encourage the student to help himself, and how to direct his labor to the greatest advantage. In his introduction, he tells the student what to look for in a work of literary art, and gives critical comments, Tennyson's letter on "The Princess," and illustrations of metrical peculiarity. The notes have been prepared with great care. The book shows deep and accurate scholarship. (Ginn & Co., Boston.)

A common-sense method of acquiring good "Business Handwriting" is given by A. W. Rogers, in a little volume of 72 pages. The author uses the muscular movement, and many of the plates in the book give exercises for muscular training. He attends, also, to the important matters of form, slant, etc. The book is a good one for those persons who desire to acquire a light and rapid hand without the aid of a teacher. Many useful hints will be found in it by teachers. (Sir Isaac Pitman & Sons, New York. 35 cents.)

Nature study, to be the most effective, must be timely. This fact is fully recognized in the teacher's manual for "Nature Study in the Elementary Schools," by Mrs. Lucy Williams Wilson, Ph.D., head of the biological laboratories in the Philadelphia normal school for girls. Her method is the new one in nature study, which Col. Francis W. Parker, in his preface to the volume, says is founded "upon the divinity of the child and the influence of God's creations upon his growing mind." The book gives a course of observation and study for the first four years of school life. Each month, work appropriate to the season is done in botany, zoölogy, meteorology, etc., though it is not called by these names, supplemented with literature suited to the occasion and the child's comprehension. It is a most valuable help, though the teacher must not lean on it entirely. She must be the judge of how much, and what kind, of this mental food her school requires. The book is liberally illustrated. (The Macmillan Co., New York. 90 cents.)

Literary Notes.

The supplements to the March issue of the "International Studio" are five in number, each individual and distinctive in its own field. The most important article of the number is the critical and descriptive notice of the "The Work of E. Borough Johnson," with ten illustrations. Dutch and French art are contrasted in two papers on Nico Jungmann and Caran D'Ache, with eight and nine illustrations each. A fourth paper on "Some Glasgow Designers," occupies some dozen pages.

The subject of book-binding is one of present-day interest. The "Book Buyer" for March gives six examples of Otto Zahn's work with a photograph of the worker. The reviews with illustrations from the volumes themselves, are valuable as suggestions to book buyers, and the clear type and carefully printed pictures, make the little monthly's appearance welcome. (Chas. Scribner's Sons, New York.)

In the "Forum" for March we find fourteen papers upon science, politics, and the fine arts. Hon. James Wilson opens the table of contents with the question, "Should the United States Produce its Sugar?" "The Duty of Annexing Hawaii," is the subject of Senator John T. Morgan's paper. The ex-governor of Missouri, Hon. Wm. J. Stone, discusses "The Democratic Party and its Future." The visit of the celebrated organist, Alexandre Guilmant, to this country, will give point to his paper on "Organ Music and Organ Playing.' (The Forum Publishing Co., New York.)

"In the Wake of a War," by Julian Ralph, in the March "Harper's," brings the realities of war very close to the reader, although it is an episode of the Turco-Greek affair from a correspondent's point of view. In line with the present interest in battles is the opening article entitled "An American Army Maneuver," by Franklin Matthews, descriptive of a sham battle by New York regiments. The result of Mark Twain's experiences abroad begins now to appear. His account of Austrian political life in this number is dated last November. Four short stories brighten the serious aspect or the magazine.

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Interesting Notes.

Recent Astronomical Progress.

The discovery of the last ten years which has most occupied the attention of the professional astronomer is that of the variation of latitudes everywhere on the surface of the earth, the law of which has been worked out by Chandler. The variation does not involve any change in the actual distance of points on the surface of our globe from each other, but only in the position of the axis of rotation. If an observer could station himself at the north pole, and erect a stick at the precise point around which the earth was at any moment rotating, he would find this point to remain nearly in the same position all day, or, perhaps, for a few days. But, in the course of weeks, he would find it to change its position; and, by continuing his observations through a period of several years, he would find it to move round a central point in a somewhat varying and irregular curve, making a complete revolution in about fourteen months. The greatest distance from the central point might be twenty-five to thirty feet; but the radius of the circle in which the pole moves ranges between this distance and almost nothing. An observer in 1883–84, or seven years later, 1891–92, would have found the distance about thirty feet. But, during the following revolution, the pole, while keeping up its rotation, would have approached very near the central point; so that during the years 1887–88 and 1894–95 the amount of change was very small. If Chandler's prediction be verified, the variation is now again approaching its largest value, and during 1898 will be as large as it ever was. The probable cause of the deviation is found in the annual changes undergone by the motion of the great masses of air on the earth's surface, combined with the deviation of the earth itself from a perfect sphere.—Prof. Simon Newcomb in the "Forum."

An art critic, describing a collection of bric-a-brac, said:—"The visitor's eye will be struck on entering the room with a porcelain umbrella."

The Loud bill has been killed in Congress, and, notwithstanding the opposition against this unjust bill came from all parts of the country, great credit for its ultimate defeat is due Mr. H. N. Wheeler, connected with the firm of Houghton, Mifflin & Co.

"Mamma, the right way to spell 'high' is h-i-g-h, isn't it?" "Yes, dear. Why do you wish to know?" "'Cause I'm writin' a composition about the highena."

It is an acknowledged fact that the Albany Perforated Wrapping Paper Company is manufacturing more and better toilet paper than any two companies in the United States. The fixture accompanying the paper is not only strong but ornamental, and cannot fail to give satisfaction. From a small beginning a few years ago the company have extended their plant and business all over the United States. They have now branch offices at 28 North Moore street, New York; 375 The Bourse, Phila.; 32 Wells, Fargo Building, San Francisco; 57 Plymouth Court, Chicago; 285 Devonshire street, Boston, and their main office is at Albany. These goods are kept by all druggists, grocers, and stationers, but if you cannot obtain same, write direct to the main office, or either of the branches most convenient to you.

Hound Against Wolf.

The American wolf is a vicious marauder, and has done untold damage in the far West by his depredations on the cattle ranges. He is doomed to extermination, however, although he has defied every agent of extermination so far arrayed against him.

A pair of Irish wolfhounds, imported recently, received systematic training on a treadmill and in other ways last winter, in Louisville, and this spring will be furnished an opportunity to show their abilities in killing the American wolf. The outcome of this experiment is said to be eagerly awaited by the cattlemen in the far West, who suffer much loss through the depredations of wolves. Russian wolfhounds and American deerhounds, have been tried in vain. One of the great difficulties in the way of killing the American wolf, is the peculiar thickness of the ani-

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mal's neck and the large quantity of matted hair thereon. This renders it almost impossible for a dog to choke a wolf, and in a battle with dogs the wolf's phenomenally sharp teeth usually cut the dog to pieces. Then, they have such a phenomenal spring that they can frequently jump a distance of ten or fifteen feet and land on the dog's back, tearing their opponent's head and face with their fangs. Owing to these facts, Kentucky dog fanciers do not generally believe that there is a breed of dogs in existence capable of exterminating the American wolf, or even to interrupt him in his marauding expeditions of the great cattle plains of the West.

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Wasps as Paper-Makers.

Wasps were the first and original paper-makers, and as geometricians and architects vie with their relatives the bees. One has only to study the stories in that gray apartment house called a wasps' nest, to wonder at and admire the skill of the builders. The wasps build their nests of a material made by gathering bits of weather-worn wood and chewing them up, making a true paper pulp. These builders are equal to emergencies. Once we involuntarily unroofed a wasp's nest that was under a board. Several days latter we discovered that the nest was well roofed by neat paper shingles. Never before, probably, had these wasps or their ancestors been called upon to roof a domicile, but these did this original work with much show of the knowledge of the principles of roof construction.—Anna Botsford Comstock, in "The Chautauquan."

On this page will be found the advertisement of the St. Denis Hotel, which is most centrally located, and is especially convenient for teachers and school officers visiting the city, as there is found within a radius of a few blocks, all the leading educational publishers, school-supply houses, and school furniture manufacturers. The hotel is noted for its fine cuisine, and is well-known as a ladies' hotel, as there is no hotel in New York city where ladies unaccompanied by gentlemen can find better protection than at the St. Denis. Among the late improvements is a new dining room, which is one of the finest specimens of Colonial decoration in this country. The hotel and the restaurant rates are as reasonable as you can find anywhere in the city, for that class of entertainment.

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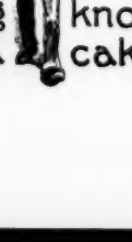

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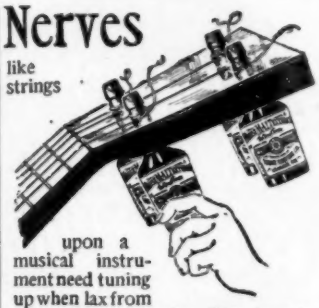

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Vick's Garden and Floral Guide makes its annual appearance with a gay-colored cover ornamented with the golden day lily. As next year is the fiftieth anniversay of the founding of this well-known house, a unique proposition is made to all the old customers to give the date of their first order. Every customer is to be remembered with the anniversary souvenir, but the oldest one is to receive something special. Interest will be attached to the outcome of this announcement. In the meantime the Guide should be consulted by everyone intending to do any gardening this summer. It furnishes descriptive illustrations of every specimen of flower and vegetable, with the satisfaction insured for good results that is the trade-mark of the firm of James Vick's Sons, Rochester, N. Y.

Some Swedish Customs.

"Blue Monday" is unknown in Stockholm, since washing is a half-yearly festival, or at most a quarterly one. That means stores of linen, and after seeing the supplies of the Swedish housewife in good circumstances, you believe the tales told of a certain queen of the seventeenth century, whose stores at Gripsholm are still unexhausted. But in those good old days even the true Swede thinks a proper course of gymnastics will cure almost every ill but a fever or some difficulty requiring a surgeon. And doctors in Stockholm never send bills. On the eve of New Year's the house-father sends to the family physician what he thinks right; he receives the doctor's card in return, as receipt; but if he sent nothing the good man would still come when called for.—Emily F. Wheeler, in "The Chautauquan"

"Old Remedy—New Uses."

There are very many important uses for Antikamnia, of which physicians as a rule may be uninformed. Before starting on an outing, everybody, and this includes tourists, picnickers, bicyclers, and in fact, anybody who is out in the sun and air all day, should take a five-grain Antikamnia tablet at breakfast, and avoid entirely that demoralizing headache which frequently mars the pleasure of such an occasion. This applies equally to women on shopping tours, and especially to those who invariably come home cross and out of sorts, with a wretched "sight-seer's headache." The nervous headache and irritable condition of the busy business man is prevented by the timely use of a ten-grain dose. Every bicycle rider, after a hard run, should take a bath and a good rub-down, and two five-grain Antikamnia tablets on going to bed. Crush the tablets before taking. In the morning, he will awake minus the usual muscular pains, aches and soreness. As a preventive of the above conditions, Antikamnia is a wonder, a charming wonder, and one trial is enough to convince. All genuine Antikamnia tablets bear the monogram AF

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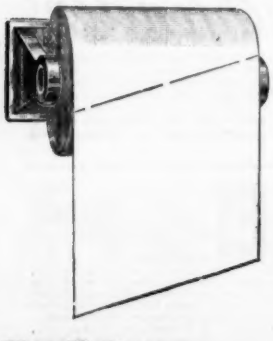

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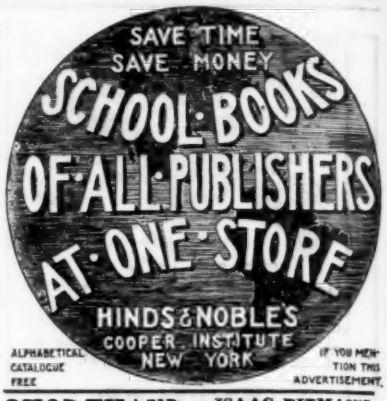

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